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AUTHOR Walker, Scott V.; And Others
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ABSTRACT

This handbook is designed to assist classroom teachers and administrators in organizing, planning, and implementing a comprehensive safety program K-12 at the local school or district level. The handbook is organized in three sections. The first section contains 28 units for the elementary level that cover the following topics: first aid training; choking; fire safety; hurricane safety; water safety; Halloween Safety; bicycle safety; firearms and hunting; buses and cars; electrical safety; flood safety; child care; Christmas safety; fireworks and explosives; playground, park, and recess; camping and hiking safety; school building safety; walking, jogging, and sign recognition; severe weather safety; in-home safety; fractures; bleeding; poisons; boating safety; artificial respiration and mouth-to-mouth resuscitation; tornado safety; burns; and bites and stings. Each unit contains one or more objectives, concept, and student activities. Most units are designed for use during one week. The second section of the handbook contains seven units for use on the secondary level. Units cover the following topics: in-school safety, safety in the home, recreational safety, natural disasters, science laboratory safety, driver education and traffic safety, and vocational education safety. All but the last unit consist of 1 to 13 projects for students to conduct, each listing objectives and activities. The last unit, on vocational education safety, lists the responsibilities of each level of personnel involved in vocational education safety. The final section of the guide provides a list of suggested resources including names and addresses of businesses, government agencies, and nonprofit organizations that can be contacted for print and audiovisual aids for teaching safety concepts. (KC)

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# HANDBOOK FOR SAFETY EDUCATION

## A Teacher's Handbook for Safety Education Grades K-12

Developed By
The Comprehensive Health and Safety Unit
Curriculum Section
Office of General Education
February, 1981

South Carolina Department of Education: An Equal Opportunity Agency

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State Department of Education
Columbia, South Carolina
Charlie G. Williams
State Superintendent of Education

Developed By

Scott V. Walker
Substance Abuse Education Consultant

Beverly Enwall
Chief Supervisor
Curriculum Section

Joel Taylor
Director
Office of General Education

Sidney B. Cooper
Deputy Superintendent for Instruction

Charlie G. Williams
Superintendent
State Department of Education
Columbia, South Carolina

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The contents of this handbook were prepared by the following committee:

Scott V. Walker, Substance Abuse Education Consultant
State Department of Education, Chairman

Joan Anderson, Consultant
Business and Office/Home Economics
Charleston County School District, Charleston

Lee Applegate, Highway Safety Coordinator
State Department of Education

Richard E. Bernstein, Driver/Drug Education Teacher
Gaffney Senior High School, Gaffney

Peggy Cain, Science Consultant
State Department of Education

Lillian Cook Carter, Health Education Teacher
Goose Creek High School, Goose Creek

Pat Harkey, Retired Science Teacher
Fort Mill High School, Fort Mill

Helen Hasty, Substance Abuse Building Representative
Chester Senior High School, Chester

Alice Linder, Environmental Education Consultant
State Department of Education

Carl McClure, Physical Education Teacher
Chapin Elementary School, Chapin

Clyde Manigo, Substance Abuse Education Consultant
State Department of Education

Estelle Muse, Vocational Education Teacher
Aiken High School, Aiken Campus, Aiken

Barbara Rogers, Science Teacher
Conway Middle School, Conway

Harold Schreiner, Physical Education Consultant
State Department of Education

William J. Singletary, Industrial Arts
and Prevocational Education Consultant
State Department of Education

Anna Karin Wolfe, Physical Education Teacher
Batesburg-Leesville High School, Batesburg

Steven H. Wycoff, Director of Aquatics
Anderson School District #5, Anderson

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## PREFACE

This handbook is designed to assist all classroom teachers and administrators in organizing, planning and implementing a comprehensive safety program K-12, at the local school or district level. Safety for our youth while at home, in the community and at school has high priority in the State Department of Education.

As educators we have the responsibility to provide a safe environment in and around our schools, as well as classroom activities for our youth designed to promote safety measures while at work, at play, and during leisure time activities.

The classroom teacher has an unusual opportunity to guide students in formulating sound attitudes and safety practices in obeying and conforming to all rules and regulations of safety.

The ultimate value of these materials will be determined by the extent to which they are utilized in planning and implementing the activities into the existing school curriculum.

Charlie G. Williams
State Superintendent of Education

# Section I

# Elementary Level Units

The elementary section of this handbook is divided into 28 units. A unit is generally suggested as one week's work, although some units are much more time consuming than others.

The order of arrangement if followed exactly should bring certain units up for consideration at approximately the appropriate calendar date. For example: Halloween Safety and Christmas Safety should be used just before those events. Other units may be taught in the order that the teacher feels most appropriate, except those dealing with First Aid.

Unit 1, First Aid Training, should be taught first in the First Aid area. The other First Aid Units are arranged in logical sequence with the most urgent situations being covered first.

## Rationale for Development of a Safety Team

It is strongly recommended that each school carefully establish and develop a Safety Team or Safety Council. This group should consist of school administrators, teachers, parents, students and members of the community dedicated and committed to implementing a comprehensive program of safety into the total school program.

This council or team should work with clearly stated safety objectives, altering these objectives as needed and periodically evaluating the program and results. The involvement of school personnel, students, parents, and community should create increased interest, greater dimension, and more effectiveness in a continuing safety program.

Objectives: 1. To utilize a Safety Team to strengthen the safety program.

2. To establish policies (in writing) to assure:

   (a) a safe school environment

   (b) responsible behavior

   (c) an effective program of safety education in the school.

**UNIT 2**

**PROJECT: CHOKING, HEMLICH HUG**

Objective: To teach students what to do for a victim that is choking.

Concept: 1. If the victim can cough, speak, or breathe, do not interfere. If the victim cannot cough, speak, or breathe, give them four quick firm blows between the shoulder blades. Then administer four quick upward thrusts. These thrusts can be done by placing the thumb of one fist just below the sternum. The other hand is placed over the fist. Both hands are then pulled in and upward creating an upward thrust at the base of the diaphram. Repeat these steps until effective or until victim becomes unconscious.

2. For an unconscious victim try to breathe into the victim's mouth, four back blows, four quick upward thrusts, and finger probe. Repeat these steps until effective. The upward thrusts are administered best with the victim on his back. The rescuer places the heel of one hand on the stomach below the sternum, with the fingers pointing toward the head. They then interlock fingers or grab the fingers of the bottom hand with both hands, palms down, they push down and upward toward the chest. The fingers probe is accomplished by grasping and lifting the chin with one hand and probing into the mouth and/or throat for obstruction.

Activities: 1. Teachers pretend to be choking (if it won't be too traumatic on any of the students) and see what happens.

2. Discussion: What would you do if you and your dad were camping and he became choked on a piece of meat. Etc.

3. Develop a chart that could be taken home and studied with parents.

NOTE: In conjunction with all First Aid Units teachers are referred to the American National Red Cross First Aid Textbook.

**UNIT 1**

**PROJECT: FIRST AID TRAINING**

Concept: 1. First aid training means accident prevention and elimination of further injuries. First Aid is the immediate and temporary care of a victim.

2. First Aid should not be considered as an alternative to professional medical attention. However, the time between an accident and the arrival of professional medical care is often critical. What happens during this time can make the difference between temporary and permanent injury, and sometimes between life and death.

Objective: To teach students the importance of having sound First Aid training.

Activities: 1. Have students inventory bathroom cabinets at home. Items found in a good cabinet: mouthwash, toothpaste, deodorants, sterile dressings, etc. Items found in a hazardous cabinet: patent medicines, prescription drugs, and sundries.

2. Have a student stimulate a collapse or faint at desk or to the floor. Watch the reactions of the students for a few seconds, then ask if someone knows what to do. This can turn into a good classroom discussion.

   (a) Keep the victim in a prone position and as comfortable as possible.

   (b) Determine what part(s) of the body sustained injury before giving first aid. (Establish priorities when more than one injury is present.) *Do not move* victim unless absolutely necessary. If the victim must be moved and head or back injuries are suspected keep these parts from moving.

   (c) Have someone call an ambulance (serious case).

   (d) Administer first aid.

   These conditions demand immediate attention (in order of priority).

   - profuse bleeding
   - loss of breath
   - poisoning

3. Make posters and then display them. Topic for the posters could be what to do for the victim.

NOTE: In conjunction with all First Aid Units teachers are referred to the American National Red Cross First Aid Textbook.

**UNIT 3**

**PROJECT: FIRE SAFETY**

Objective: To inform students of the appropriate action to take in case of fire.

- Make advance preparations. National Fire Safety Week is usually the second week in October. Activities during this time would correlate with T.V., radio programs, etc.
- Order materials for handouts — Listed in Resources

Activities:

1. Review the school's fire drill rules.
2. Ask the principal to conduct a fire drill.
3. Set up skit situations for your grade level. Examples:
   (a) You are walking down a street; you see smoke coming from a store window. A policeman is standing on the corner; there is also a fire alarm and telephone nearby. What would you do?
   (b) You see a child with a box of matches. You don't know the child. The child starts striking the matches and throwing them in the grass. What should you do? The child's clothing catches fire. How do you put out the fire? Then what do you do? How would you treat a simple burn?
   (c) You are in the school auditorium enjoying a program when you smell smoke. What would you do?
4. Either use the Home Fire Check pamphlet from National Fire Prevention Association or make your own for each student to take home and return.
5. Praise students who bring these pamphlets back, especially those who have improved home fire safety — discuss.
6. Make use of pupil's talents: Some may like to —
   (a) make posters to place in halls, etc.
   (b) write a skit and direct it.
   (c) write and give a short radio spot announcement or commentary.
7. Use EDITH Exit Drills in the Home from National Fire Prevention Association. Order enough for every student to take home.
8. Show films then discuss:

   Safety with Fire
   In Case of Fire
   Fireman

**UNIT 4**

**PROJECT: HURRICANE SAFETY**

Objectives: 1. To enable students to identify the characteristics of a hurricane.

2. To enable students to learn what a hurricane warning means.

3. To enable students to take the correct safety steps in the event of an approaching hurricane.

Concept: Preparation for an approaching hurricane is important.

Activities:

Characteristics of a Hurricane

1. Teacher will lead a discussion of the characteristics of a hurricane:

   (a) A hurricane is a tropical cyclone in which winds reach speeds of at least 74 miles per hour. It is a giant whirlwind in which air moves in a large, tightening spiral around a low pressure center.

   (b) Hurricanes form over tropical oceans where there is an abundance of moisture in the warm air (Atlantic Ocean, Caribbean, or the Gulf of Mexico).

   (c) Coastal areas from Texas to Florida and from Florida to New England face the greatest threat of a hurricane disaster.

   (d) Most hurricanes occur in August, September, and October. South Carolina was hit by 47 hurricanes between 1940 and 1972 (average of 1.4 per season).

   (e) The diameter of a hurricane is usually 50 to 75 miles but can be greater. The hurricane carries its destructive force over a path of hundreds or even thousands of miles. Hurricanes generally travel from 8 to 15 miles per hour.

   (f) The eye of a hurricane is calm with light winds and clear or partly cloudy skies. However, hurricane-force winds and torrential rains surround the eye.

   (g) Hurricane winds do great damage, but drowning is the greatest cause of hurricane deaths. Hurricanes bring huge waves which raise tides 15 feet or more above normal. Flash floods can occur in coastal lowlands and inland.

Hurricane Watch and Warning

1. Teacher will discuss with the students the meaning of the two types of hurricane alerts.

   (a) A hurricane *watch* means that offshore, 24 to 36 hours away, there is a storm that could become a hurricane and could pose a threat to the area.

   (b) A hurricane *warning* means that the winds in the storm have or are expected to reach hurricane force (74 m.p.h.) and are expected to move into the area within 24 hours. Warnings are usually issued in the hope of providing people with at least 12 hours of daylight to take protective action and plan for evacuation.

Hurricane Safety Rules

1. Teacher will lead a discussion of the safety rules which should be followed when a hurricane alert is issued:

   (a) When your area is covered by a hurricane watch, continue normal activities, but stay tuned to radio or television for all National Weather Service advisories.

   (b) When your area receives a hurricane warning, you and your family should leave low-lying areas. Windows should be boarded up or protected with storm shutters or tape. Outdoor objects that might be blown away should be secured. Drinking water should be stored in clean bathtubs, jugs, bottles, and cooking utensils. Battery powered equipment should be checked (radio, lights, etc.). Keep calm until the emergency has ended. Last minute hurry should be avoided by planning your time before the storm arrives.

2. Teacher will lead a discussion of what students could do at home to help their family prepare for a hurricane.

**UNIT 5**

**PROJECT: WATER SAFETY**

Objective: To teach students the importance of personal safety in the aquatic environment.

- The student will know the importance of learning to swim and the organizations in the community which offer swimming instruction.
- The student will be able to identify when and where to swim.

Activities:

Learning to Swim

1. Discuss the importance of learning to swim with the students.
2. Help the students make a list of all the organizations in your community which offer swimming instruction. Have the students take the list home with them and discuss with their parents.

When and Where to Swim

1. Discuss the following safety principles around the water with your students:
   (a) Never swim alone. Swim with a buddy who can assist.
   (b) Swim only in a supervised area with lifeguards on duty.
   (c) Follow the safety rules where you are swimming.
   (d) Know your limitations and do not overestimate your ability.
   (e) Stay out of the water when overheated and immediately after eating.
   (f) Stay out of the water during electrical storms.
   (g) Avoid long periods of being in the water or overexposure to the sun.
   (h) Always swim a safe distance away from diving boards.
   (i) Dive only into known waters of adequate depth.
   (j) Non-swimmers or novices should not go into deep water with inflated tubes, air mattresses, or other artificial supports.

(k) Don't hyperventilate before swimming underwater.

2. Call for help only when you really need it.
3. Use the American Red Cross water safety poster to lead a discussion about safety rules around the water.
4. The class can invite the local Red Cross Safety Services Director or Water Safety Chairman to give a talk and answer questions about water safety.
5. Ask students to describe their last experience at a pool, beach, or lake. Help the class analyze whether the area is safe and whether the student followed good safety principles.
6. Obtain a list of the safety rules at the local pool or beach. Discuss the reason for each safety rule.
7. Organize a field trip to a local pool or beach. Ask the pool director or head lifeguard to discuss the safety rules and then enjoy a safe swim.

**UNIT 6**

**PROJECT: HALLOWEEN SAFETY**

Objective: To help students become aware of hazards especially present at Halloween.

- Elementary pupils are subject to many different kinds of accidents on Halloween night.

Activities: 1. Begin several days before Halloween to involve your class by:

(a) Writing a radio spot announcement to remind motorists to use extreme caution.

(b) Write a safety skit to present to K-3. (Grades 4-8)

(c) Make posters to put around the schools.

2. You may make a safety check list for the students that might include:

Costumes — (Yes or No)

(a) Are eyes exposed for clear vision?

(b) Is the costume a safe length to prevent stumbling?

(c) Is the material fire resistant?

(d) Is the costume large enough to cover warm clothes on a cold night?

(e) Is it seen easily at night?

(f) Are your shoes suitable for the weather and do they fit?
NOTE: Clown shoes or tramp shoes could cause falls.

Pedestrians — (Yes or No)

(a) Do you walk on the sidewalk or path, away from traffic?

(b) Do you avoid dark alleys or cross-cuts through wooded areas or yards? (Low fences, tree limbs and clothesline can hurt.)

(c) Do you carry a flashlight?

(d) Can you be seen by others? Is reflective tape used?

(e) Is an adult close by in case you need one? (Accident, etc.)

(f) Do you obey traffic signals?

(g) Are you careful not to talk with or accept rides with strangers?

(h) Do you trick or treat only in your neighborhood or with friends?

(i) Do you take your treats home and eat them after your parents decide whether or not they're safe?

**UNIT 7**

**PROJECT: BICYCLE SAFETY**

Objectives: 1. To teach young bicyclists basic riding skills, bicycle maintenance, and safe driving habits.

2. To remind elementary students of safe riding practices.

Materials: Teacher should see Resources section and collect necessary information for discussion and/or distribution.

Activities: 1. Teacher may lead a discussion on these items.

(a) criteria for selecting a bicycle

(b) proper care of the bicycle

(c) correct riding methods

(d) safe riding habits

(e) existing local and state laws governing the operation of bicycles on streets and highways.

2. Contact your local law enforcement agency and check on ordinances concerning bicycle registration. The registration form could call for the following information:

(a) name

(b) address

(c) telephone number

(d) general description of bicycle including make, model, color, serial number, size and make of tires, make of saddle, and identifying marks or characteristics.

3. Set up an inspection station and check bicycles for:

(a) brakes

(b) lights

(c) reflectors

(d) horn or bell

(e) tires (alignment, spokes, wheels, and condition)

(f) chain

(g) pedals

(h) handlebars

4. Survey the local provision of bicycle paths for recreational purposes.

5. Sponsor Junior Bicycle Clubs in elementary, middle, or junior high schools.

6. Test riders on basic riding skills and riding techniques.

7. Publicize your project.

8. Send for free bicycle safety posters: Bicycles, U. S. Consumer Product Safety Commission, Washington, D. C. 20207; or call toll free, 1-800-638-2866.

9. Establish grade levels for bicycle safety activities for junior, intermediate, and senior age groups.

10. Remind elementary students of safe bike riding practices, using a presentation and follow-up poster contest.

(a) Determine where and when you will conduct the presentation and what age level to involve.

(b) Contact the school principal of the age level(s) for which the presentation is designed, and get his or her support.

(c) Contact the teachers of your target groups, and ask for their support and help in working with their classes. Confirm dates and times.

(d) Ask your local bike shops for donations of reflectorized tape, bike flags, and other bike accessory items for prizes in the poster contest.

(e) Determine how posters will be judged.

(f) See Resources for agencies which have pamphlets that will help in your presentation.

(g) On the date of your presentation, be prompt and have all your materials ready.

(h) Decide on content. The presentation will depend on the problems or concerns of the school and community. It might include hand signals and do's and don'ts of bicycle riding. Also, go over any pamphlets you decide to distribute.

(i) After the presentation, have each student make a poster depicting one of the rules he or she learned in the presentation.

(j) Have students complete posters. They can finish that day, or you can return to judge the posters at a later date.

(k) Award prizes.

11. Fundamental Safety Guide for Bicycle Drivers
Suggest reproducing as needed for distribution to students.

WHAT TO DO

1. Know and obey the rules and traffic regulations. Traffic lights, stop signs, no-turn signs, etc.
2. Ride on the right side of the roadway, in the same direction of the traffic, in single file.
3. Stop and look before coming out of alleys and driveways.
4. Slow down or preferably walk your bike across busy intersections.
5. Use proper hand signals to let the other drivers know what you are going to do.
6. Park and lock your bike in racks or other safe, easily noticeable place.
7. Make sure your bike has a white light on the front and red light or reflector on the back for night riding.
8. Have a bell, horn or other warning device on your bike.
9. Keep bike in good working order (good brakes, tires, seat adjusted, handle bars tight, fresh batteries in light, etc.).
10. Keep a safe distance between yourself and the car ahead of you and watch the traffic carefully
11. Use bike paths whenever possible.
12. Wear clearly visible clothes for night riding in traffic.
13. Become familiar with traffic regulations in your area because the law differs from state to state.
14. Drive your bike defensively at all times.
15. Give pedestrians the right-of-way at all crosswalks.
16. Use racks to carry articles, but do not overload, making bicycle hard to steer.
17. Watch for doors opening suddenly on parked cars, especially in narrow lanes.
18. Register and license your bike. It may be required by your community.
19. Be prepared for bikeways that come to an abrupt, unheralded end.

WHAT NOT TO DO

1. Do not ride more than one person on a bike unless the bike is made for two; it makes steering uncertain, balance unsteady and vision is obstructed.
2. Do not zigzag in and out of traffic or try stunts on the streets.
3. Do not carry heavy loads or oversized bundles that interfere with maneuverability of the bike and may pin you under in case you fall.
4. Do not hitch a ride on a truck or other motorized vehicle.
5. Use extreme caution on wet leaves, grass and slick streets for they are slippery and make turning and braking difficult.

BE WISE

1. The caliper brakes are extremely powerful and should be used with care.
2. High pressure tires normally lose air. They should be checked before each trip. Over-inflation should be avoided.
3. Beware of riding on the right side of a car. There is a danger to the bicyclist when the motorist makes a right turn. A definite visibility problem exists in seeing the bicyclist.
4. In choosing a bicycle you should always buy a bike that fits — and can perform efficiently for the purpose it is desired.
5. There are twice as many bicycle fatalities as injuries from accidents occurring during night hours.
6. Over seventy percent of the bicycles/car accidents involve the motorist not seeing the cyclist or the cyclist not seeing the motorist.
7. The bicyclists' biggest fault is entering the traffic at right angles to the traffic.
8. Bicycle safety problems are most prominent in commuting to school and work.
9. Seventy percent of accidents are the fault of the cyclist.
10. Oil slicks, loose gravel, ice, potholes, railroad tracks, drainage grates, wet grass or leaves, are hazardous to the cyclist.
11. Education and enforcement of local bike rules are effective in preventing cyclists from taking needless risks.
12. Separating the automobile and cycle traffic is most effective in reducing accidents.
13. The four major accident locations in order of frequency for school age children are: (a) on a street between intersections, (b) on sidewalks, (c) on a driveway, (d) at a street intersection.
14. To protect your bike against theft, use a heavy duty, case hardened chain and lock with a shackle of not less than ⅜''diameter or a compact bicycle rack constructed of ⅜''steel plate.
15. Poor sight lines around corners contribute to many accidents.
16. Space on sidewalks taken up by lamp posts or other obstructions can lead to accidents when two bicycles going in opposite directions meet.

THE JOYS OF BICYCLING

1. Ten speed bikes can often travel between 15 and 20 m.p.h. and sometimes more.
2. Bikes provide door to door service.
3. Bikes are non-polluting.
4. Bikes need no fuel.
5. Bikes are economical.
6. Bikes are easy to maneuver or travel in places too narrow for other motor vehicles.

7. Bikes require very little parking space.
8. Bikes do not contribute to urban noises.
9. Bike riding is good for the health.
10. Bikes are fun.
11. Bikes are less congesting.
12. Bicycles enable one to be more aware and enjoy the surroundings.

**UNIT 8**

**PROJECT: FIREARMS AND HUNTING SAFETY**

Objectives: To teach students the written law enforced by the game conservationist and to respect the ethical code expected of the hunter.

Activities:
1. With the principal, arrange for a short course to be given on firearms safety. In most communities there are hunting clubs, police organizations, Wildlife Department personnel, etc., ready and pleased to be asked to conduct a class.
2. Before the course have students develop slogans for posters and/or spot announcements. Have students write poems, etc. Examples:
   (a) A good hunter is a safe hunter. (slogan)
   (b) Don't "think" but know (poem)
   When your gun's unloaded.

   An empty one has often exploded!
   You took out the bullets

   That's what you said.
   But thinking and saying
   Won't bring back the dead!
3. Select the best poem and print it in the school paper or send it for printing in the *S. C. Out of Doors* to be published by the S. C. Wildlife Federation.
4. Invite a hunter to come to class and demonstrate proper clothing (bright orange) and the way to carry firearms.

NOTE: Be very sure that the activities in this unit have approval of your principal and administration before becoming fully involved.

**UNIT 9**

**PROJECT: BUSES AND CARS**

Objectives:
1. To help the students learn how to approach, board and depart from a bus and car safely.
2. To help the students learn proper behavior as a passenger on a bus and in a car, van, truck or any moving vehicle.
3. To help the students realize the danger of playing or walking around moving or parked buses and cars.

Concept: There are certain passenger skills which may help keep the passenger and the vehicle safe. The passenger in the car or bus must also be aware of certain safety practices he must follow while going to and away from his means of transportation.

1. Make sure doors are closed and locked.
2. Sit, do not stand when the vehicle is in motion.
3. Avoid distracting the driver by yelling, jumping around or throwing things.
4. Keep your head, hands, arms and legs inside the bus or car.
5. Keep heavy or large objects off the shelf behind he back seat.
6. Always get out of a car on the curb side and wait for the bus driver to stop and let you off.
7. Wait until the bus has come to a complete stop before attempting to board.
8. Stand a safe distance from the street while waiting for a bus or car.
9. Cross the street in front of the bus after it has come to a complete stop with the stop sign out. But look both ways to make sure cars are obeying the stop sign.
10. Never push others while waiting for, getting on or off a bus.
11. Always fasten your seat belt.
12. Never get in a car with a stranger.

Activities:

Level One — Primary

1. Make a bulletin board (everyone contributing) showing things you should and should not do while riding, approaching and departing from a car and bus.
2. Set up chairs in rows which look like seats in a car and a bus. The children take turns pretending to be the driver and passengers. Have them demonstrate safe and dangerous things which can happen.
3. Have the children tell how they travel to school, church and on vacations. The teacher and other children can emphasize some of the hazards they could encounter and safety practices they should follow.

Level Two — Middle Grades and Level Three — Upper Grades

1. Same activity as No. 1 Primary.
2. Same activity as No. 2 Primary.
3. Puzzle — Circle the following words which tell us about safety. You may find them across, up and down, and some are written backwards.

| | | | |
|---|---|---|---|
| OBEY | rider | curb | traffic |
| SAFETY | bus | car | yelling |
| door | moving | stop | parked |
| sit | lock | go | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| c | u | r | b | d | O | o | r | r | t |
| s | i | t | c | a | B | s | a | i | r |
| b | u | S | A | F | E | T | Y | d | a |
| a | g | a | r | a | Y | o | k | e | f |
| m | o | v | i | n | g | p | c | r | f |
| p | a | r | k | e | d | a | o | a | i |
| g | n | i | l | l | e | y | l | a | c |

**UNIT 10**

**PROJECT: ELECTRICAL SAFETY**

Many problems arise from the way we use electrical appliances.

Objectives:
1. To make students aware of the many dangers associated with small household appliances.
2. To make students aware of the many dangers when playing around power lines and during storms.

Concepts:
1. Do not overload any one electrical outlet at the same time.
2. Do not have electrical appliances in the bathroom where they can be reached while you are wet.
3. Ask your parents to see if electric blankets and heating pads are working properly.
4. Have a fire extinguisher in the kitchen.
5. Always disconnect appliances before adjusting, cleaning and after you have finished using them.
6. Be sure your hands are dry before plugging in.
7. When you spot any bad, broken wires or loose parts, unplug the appliances and tell your parents about it.
8. Keep all metals and liquids away from the inside of appliances (don't dig toast out with a knife). Never put pennies in fuse boxes.
9. Never run a cord in an area where people walk.
10. Pull plugs from sockets by the plug, not by the cord.
11. Never run electrical wires under rugs or where doors close on them.
12. Never leave appliances unattended for long periods, while in use.
13. Appliances should be turned off or unplugged before leaving home for a long time.
14. Have phone numbers of fire and police departments, emergency unit and health services close to the phone.
15. Never touch a wire you see hanging down on or near the ground.
16. If handling any electrical equipment be sure that you are standing on a completely dry surface.

17. During lightning storms
    - Try to avoid handling electrical appliances during storm.
    - Never stand under a tree or pole during a storm.
    - Stay away from open windows and doors during severe storms.
    - Never fly a kite during a storm or near electric wires.

Activities:

All Levels — Primary — Middle — Upper

1. Have students make a list of all the electrical appliances. Young children could make a picture list. Have the children ask their parents to help them check to see if the appliances are safe (frayed cords, extension cords, too many plugs in an outlet . . ). Report findings to the class and discuss what you have done or plan to do.
2. Invite a guest to speak to the class on electrical safety, such as an electrician or someone from the power company.
3. Bring newspaper clippings of accidents that have been caused because of carelessness when using electricity. Smaller children could bring pictures of possible accidents and tell about them.

**UNIT 11**

**PROJECT: FLOOD SAFETY**

Concept: Knowing what to do in case of a flood emergency is important.

Objectives: 1. Students will be able to name the basic causes of flooding.

2. Students will learn what should be done before, during and after a flood.

Activities:

Causes of Flooding:

1. Teacher will lead a discussion concerning the causes of flooding:

   Flooding occurs when streams and other waterways receive such an oversupply of water that their banks or other retaining barriers overflow or break and spill water over the surrounding land. There are two primary causes:

   (a) Heavy rains or drainage of melting snow fill stream basins with too much water resulting in an overflow.

   (b) Heavy rains in such a short time that water rips through river beds, surges over their banks, and sweeps everything before it (flash flood). Flash flooding may also occur in lower elevations where there is no established river bed, and in urban areas where there is inadequate drainage.

Flood Safety Rules:

1. Teacher will discuss with the students what should be done before, during, or after a flood:

   When you and your family receive a flood warning from radio or television:

   - Follow the advice and instructions of local government.
   - Move to safe area before access is cut off by flood water.
   - If forced to leave your home and time permits, move essential home items to safe ground and store some drinking water. Then secure your home before leaving.

During the Flood Itself, You Should:

- Avoid areas subject to sudden flooding.
- Do not attempt to cross a flowing stream where water is above the knees.
- Your family should not drive over a flooded road.
- Keep listening to your radio or television for further advice.

After the Flood Is Over, You Should:

- Not use fresh water that has come in contact with flood water.
- Test drinking water before drinking.
- Seek necessary medical care at the nearest hospital.
- Not visit the disaster area; your presence might hamper rescue operations.
- Not touch live electrical equipment in wet areas.
- Report broken utility lines to the appropriate authorities.

**UNIT #2**

**PROJECT: CHILD CARE**

Objective: To impress upon students that anyone who is responsible for a child is also responsible for the child's safety and well being.

Concept: Plan the day before you begin: Ask all students to bring pictures of babies and/or very young children. Have students make a collage with these pictures.

Activities: 1. Provide a baby care checklist or have students develop one.

Example:

(a) Are you alert, watchful and responsible?

(b) Do you know who to contact in an unexpected situation?

- Fire department phone number
- Police department phone number
- Doctor phone number
- Hospital phone number
- Parent (know where parent can be reached).

(c) Do you know safety rules that apply to baby sitters?

- Know where all exits are
- Have a flashlight and batteries available in case of an emergency
- Know where poisons and medicines are stored (out of children's reach or locked up).
- Electrical cords are out of reach
- Sockets are covered
- Toys are put away to avoid hazards
- Night lights are on for children's safety
- Stairs are blocked off to protect the very young from falling up or down
- Sewing articles or other sharp pointed articles are put away

- You understand *all* directions the parents may leave for taking care of the children
- You look in on the children often while they're asleep
- Your friends know they are not invited over while you are baby sitting, and are not to keep you on the phone
- You avoid long personal phone calls
- You keep the T.V. or radio turned low so you can hear the children if they should call or cry

2. Discuss what to do in case of fire.

   Example:

   (a) In the event of fire always get the children out of the house first and in a safe place.

   (b) Call the fire department from the nearest home or fire box. (Never return to burning building.)

   (c) Notify the parents.

   (d) Go to the children and take care of them.

3. Review simple first aid procedures for:

   (a) minor cuts or burns

   (b) bump or hurt from a fall

4. Review emergency situations.

   Example:

   (a) Do the students recognize a priority emergency that needs immediate medical attention? (severe bleeding, stoppage of breathing, swallowing poison or other material, etc.)

   (b) Do the students recognize an emergency — accident that requires a doctor's attention? (broken bones, severe burns, eye injuries, etc.)

5. Discuss safety measures when transporting small children.

   (a) How do you protect them from accidents?

   - Children under 50 pounds should be in car seats.
   - The middle of the back seat is safer than the front seat.
   - Older children use adult lap belts correctly fastened — not across the stomach but snugly buckled over upper thighs.

6. Have students make a list of safe games to play with children. Then list unsafe games. Discuss the hazards involved in these games.

7. Provide a life size doll, diapers (cloth & paper), bottle, feeding spoon and telephone.

   (a) Students Play Act:

   - Changing diapers using pins or for paper ones tapes
   - Feeding and burping after the bottle
   - Correct amounts from spoon feeding
   - Have the important numbers been listed by the phone and can you use them?

**UNIT 13**

**PROJECT: CHRISTMAS SAFETY**

Objective: To help students become aware of hazards in the home at Christmas.

Activities:

1. Order Christmas Checklist N.F.P.A. *resource*.
2. Make a Christmas safety bulletin board.
   (a) Students should check wrappers on decorations for fire resistant tags, bring any written instructions that may be on a purchased tree, lights, cotton, etc.
3. Instruct students (6-8) to check light wires for cuts or breaks before putting them on the tree. Open sockets are dangerous. Report to parents.
4. Students should have an adult check that circuits are not over loaded. Explain to the class the dangers of overloading a circuit.
5. Have pupils (6-8) write a play and present it to K-5. Include the following:
   (a) selection of a safe Christmas Tree
   (b) placement of tree in a safe place (away from fireplace, in water if alive).
   (c) check wiring of lights
   (d) don't put decorations that burn easily close to Christmas lights
   (e) don't overload circuits
   (f) be sure the tree stand is a heavy, safe one so the tree doesn't fall over
   (g) turn lights out when going out
   (h) never put lights on aluminum trees
   (i) use candles with care and away from flammable materials
6. Discuss precautions and dangers in use of poisonous substances in decorations, e.g. holly (holly berries), mistletoe, poinsettia, etc.
7. Discuss the purchase of toys for young people. Buying those recommended for the age by the producer is a good rule to follow.
8. If fireworks are used in Christmas celebrations make a safety checklist. Example: (yes or no answers) (See also PROJECT: FIREWORKS AND EXPLOSIVES)
   (a) Are you using legal fireworks?
   (b) Does your town allow fireworks in the city limits?

(c) Do you select a safe place away from dry grass, houses, barns, etc.?

(d) Do you ever light a firecracker with a sparkler? (this is very dangerous)

(e) Do you have an adult with you?

(f) Do you use a safe lighter? (book matches are dangerous)

(g) Do you drop the kitchen match in a jar of water if you use one?

(h) Are you sure no one is near the explosive?

(i) Do you stop anyone who puts a firecracker in a jar or can to explode?

(j) Are your parents aware of your using fireworks?

FOLLOW UP SAFETY

1. Discuss the proper and safe use of toys and other gifts received as presents.
2. Discuss proper and safe disposal of Christmas wrapping paper, decorations, etc.
3. Discuss danger of playing in boxes in the street.

**UNIT 14**

**PROJECT: FIREWORKS AND EXPLOSIVES**

Concepts: 1. Many children are injured each year as a result of improper use of fireworks.

2. Blasting caps — DON'T TOUCH!

Objective: To help students know some of the possible dangers of fireworks.

Materials: See page 25 for state law concerning permissible fireworks.

Activities: 1. Teacher should conduct a discussion about the dangers of certain types of fireworks often used in this state.

(a) ROCKETS: This type of fireworks contains a powder charge packed in a tube which is open at one end. The charge burns progressively and drives the tube ahead. The tube is connected to a tail that is supposed to stabilize the rocket in flight.

One danger in a rocket lies in the fact that the tail might be warped, and instead of shooting up into the air, the rocket might shoot downwards, or parallel to the ground. Rockets can cause severe burns.

(b) ROMAN CANDLES: These are repeating guns which shoot projectiles of colored fire and send out showers of glowing sparks between the shots. Roman candles contain a mixture of saltpeter and sulfur with projectiles of stars which contain aluminum or zinc and an oxidizing agent.

As the force of the exploding powder moves the projectile forward, the reacting force may kick out at the end of the candle. The stars are of a similar composition to incendiary bombs which are used in warfare.

(c) SPARKLERS are made by dipping iron wires into a potassium nitrate, sulfur, and aluminum mixture. The danger of sparklers is that, after the sparkler has stopped burning, the wire may still be hot enough to start a fire.

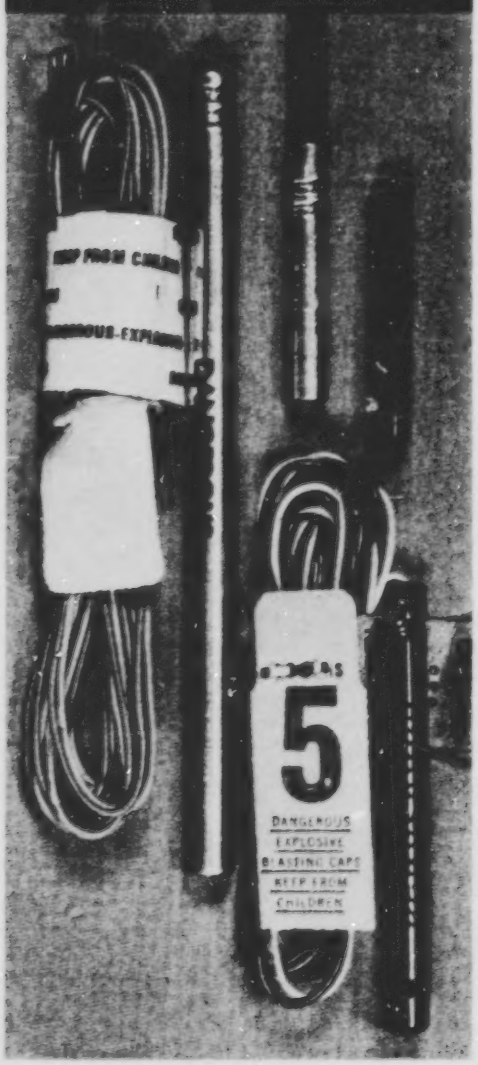
(d) A TORPEDO consists of a large cap in a sackful of coarse sand. The cap will explode if thrown on a hard surface with the result that the coarse sand may put out or seriously injure the eyes.

(e) Flash crackers are considered a high-order explosive (they go off quickly), while other firecrackers are considered low-order explosives (they go off more slowly). A flash cracker contains a composition of potassium chlorate and sugar; it is extremely sensitive to shock and will often explode violently at 120 degrees F.

2. Teacher should discuss with the class the extreme dangers involved with blasting caps.
   - Poster material from the Institute of Makers of Explosives is reproduced here as a guide.
   - Teachers may request limited copies of this material, at no charge, from the Institute. Their posters show blasting caps and detonating cord connectors in actual size and exact color.

**DANGER**

**DON'T TOUCH**




**BLASTING CAPS**

**EXPLOSIVE**

Two words tell the basic lesson of blasting cap safety —

**DON'T TOUCH!**

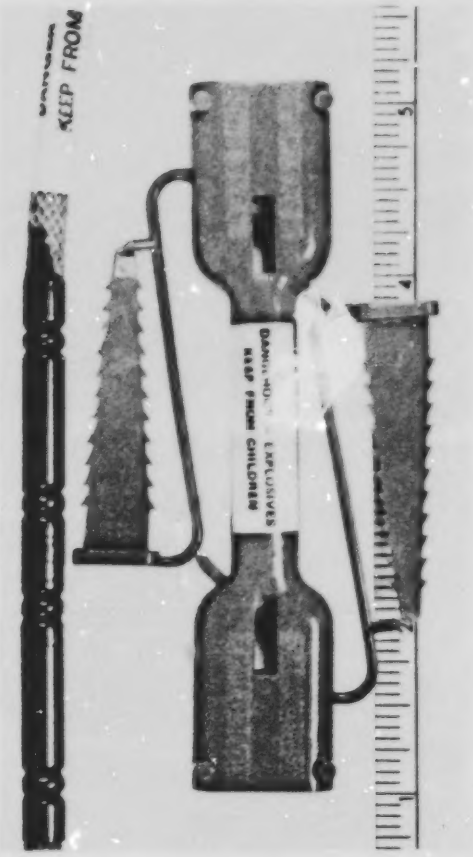
These small metal tubes — some copper, others aluminum, with or without colored wires, about as big around as a pencil, ¾'' to 6 or 7-inches long — are essential tools in construction, mining, quarrying, prospecting and agriculture. They detonate other explosives, and are for use by experts only.

Special care is taken to assure correct use of blasting caps and to provide security in transportation and storage. Occasionally caps are mislaid or stolen. In inexperienced hands they can cause serious injury — or worse.

If you find something that looks like a blasting cap — or the detonating cord connectors pictured below — report it promptly to the nearest police or sheriff, fire department or military unit.

This bookmark and related posters are a blasting cap safety education service of

INSTITUTE OF MAKERS OF EXPLOSIVES
1575 Eye Street, NW
Suite 550
Washington, DC 20005




These are detonating cord connectors. HANDS OFF!! They contain blasting cap elements. They're made in several bright colors, but all of them are DANGEROUS — EXPLOSIVES.

29

# BLASTING CAPS

**DANGEROUS** **EXPLOSIVE**

**IF YOU FIND ANYTHING THAT LOOKS LIKE THIS HANDS OFF**

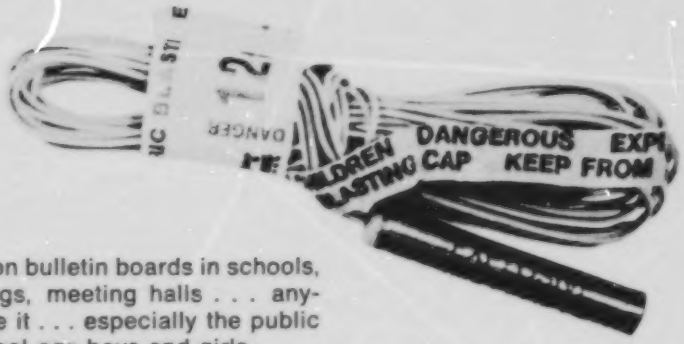
BEST COPY AVAILABLE

# DON'T TOUCH! HANDS OFF!! BLASTING CAPS

*Make others understand this message, please.*
For additional free supplies of this poster and related safety education materials, write to:

INSTITUTE OF MAKERS OF EXPLOSIVES
1575 Eye Street, NW
Suite 550
Washington, DC 20005

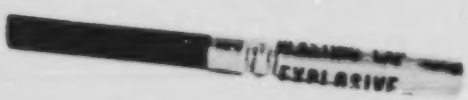
**YOU** . . . the individual holding this poster, reading its message . . . *you* have the power to make this work to prevent needless, potentially tragic accidents that can result from uninformed, unauthorized, improper handling of blasting caps. It's your decision. Your help is vital in this continuing national blasting cap safety education program!




**DISPLAY** this poster on bulletin boards in schools, churches, public buildings, meeting halls . . . anywhere the public can see it . . . especially the public that needs to see it: school-age boys and girls.

**DISCUSS** this poster's message with your sons and daughters, your friends and their children, your students, the Scouts and youth group members with whom you may work. Tell them the message on this poster is for real: DON'T TOUCH says what it means, and means what it says!

**TEACH** what blasting caps look like. This poster shows what they are, life-size, in true-color.



**INSTRUCT** young people and adults alike: HANDS OFF! DON'T TOUCH BLASTING CAPS!! Tell them to leave the removal of a blasting cap to qualified persons, such as police or public safety officers.

**ADVISE** anyone who might come across a blasting cap to report "the find" promptly to the Police or Sheriff, a Fire Department or nearest Military Unit and, if necessary, to guide them so they can remove it safely.

This poster illustrates blasting caps required whenever explosives for blasting are used. Blasting is necessary in mining; stone, rock and gravel quarries; lumbering; road and rail construction; digging foundations; seismographic exploration; tunneling; pipelines and ditching; irrigation and flood control; and demolition.

Most heavy construction work demands explosives. Without them it would all be "musclework" done painfully and tediously by animals and men. Blasting caps, like all tools, call for complete respect and careful attention to safety precautions by everyone, everywhere, all the time.

Federal, state and local authorities set rules for the proper transportation, storage, security, handling and use of explosive materials to answer public safety needs. On rare occasions blasting caps may be lost, strayed or stolen. Theft and vandalism are usually responsible for unaccountable wanderings of the relatively few blasting caps that turn up in the reach of children or uninformed persons. While the numbers of "lost" caps are small, the hazard they pose can be great, since blasting caps are sensitive explosives and can be set off (exploded) by improper treatment or careless rough handling.

Blasting caps are designed to explode with shattering shock to detonate commercial explosives and blasting agents. They should be handled only by experts trained and supervised in their use. In unskilled hands and in the wrong place, an exploding blasting cap can mutilate fingers, cause blindness and deafness — or worse.

**§ 23-35-10. Sale, storage, transportation or use of impermissible fireworks; enumeration of permissible fireworks.**

It shall be unlawful for persons to possess, sell, offer for sale, store, transport or use within this State any fireworks other than the permissible fireworks herein enumerated. The permissible fireworks consist of ICC Class C, "Common Fireworks" only, and shall mean such articles of fireworks as are enumerated as ICC Class C, "Common Fireworks" in the regulations of the Interstate Commerce Commission for the transportation of explosives and other dangerous articles, and shall include the following:

(1) Roman candles whose total pyrotechnic composition shall not exceed twenty grams each in weight;

(2) Bottle type rockets whose total pyrotechnic composition shall not exceed twenty grams each in weight;

(3) Cylindrical fountains whose total pyrotechnic composition shall not exceed seventy-five grams each in weight and whose inside diameter shall not exceed three-fourths inch;

(4) Cone fountains whose total pyrotechnic composition shall not exceed fifty grams each in weight;

(5) Wheels whose total pyrotechnic composition shall not exceed sixty grams in weight, for each driver unit, but there may be any number of drivers on any one wheel and the inside bore of driver tubes shall not be over one-half inch;

(6) Illumination torches and colored fire in any form whose total pyrotechnic composition shall not exceed one hundred grams each in weight;

(7) Sparklers whose total pyrotechnic composition shall not exceed one hundred grams each in weight;

(8) Firecrackers and salutes with casings, the external dimensions of which do not exceed one and one-half inches in length and one-quarter inch in diameter, and other items designed to produce an audible effect, total pyrotechnic composition not to exceed two grains each in weight; and

(9) Items composed of a combination of two or more articles or devices of the above enumerated approved items.

No component of any device listed in this section which is designed to produce an audible effect shall contain pyrotechnic composition in excess of two grains in weight excluding propelling or expelling charges. Pyrotechnic composition containing any chlorate or perchlorate shall not exceed five grams. All other fireworks not enumerated in this section are declared contraband, except as herein provided.

**HISTORY: 1962 Code § 66-551; 1959 (51) 333.**

**UNIT 15**

**PROJECT: PLAYGROUND, PARK AND RECESS**

Objectives:
1. To help students become aware of and alert to safety hazards while at play.
2. To help students realize that most accidents are the result of carelessness and thoughtlessness of others.
3. To help students realize that proper equipment, clothing, physical conditicning and training are essential to safety while at play.

Concepts:
1. Know and follow the rules of the game.
2. Keep play areas clean.
3. Keep equipment in good condition.
4. Have first aid handy.
5. Keep yourself in good condition.
6. Report all dangerous conditions.
7. Report all injuries at once.
8. Control your temper.
9. Keep spectators clear of the playing area.
10. Consider others.
11. Older children should be aware of smaller children in the area.
12. Be aware of others who are running, swinging bats and balls.
13. Use equipment properly.
14. Fly kites on clear days and never near power lines.
15. Never aim slingshots, bows and arrows at another person.
16. Be careful not to pack snowballs too hard or with rocks.
17. Never play in or near streets.
18. Never push or shove others.
19. Never attempt to walk or skate on thin ice which may form over ponds or any water in a park.

Activities:

Level One — Primary

1. Take the class for a walk, noting areas which are dangerous (too close to the street or bus areas).
2. Discuss possible hazards such as running into swings or bats. Emphasize that they need to be aware of others (not looking where they are going, especially while running).
3. Make a picture chart of playground safety to display in the room.

Levels Two and Three — Middle-Upper Grades

1. The class can go out on the playground and pick up anything which may be dangerous; broken glass, metal objects, sticks and trash. Write a newsletter for other classes telling them about the project and ask for their cooperation in keeping the playground a safe place to play.
2. Inspect the playground equipment, noting anything in need of repair. Report this to the principal or maintenance man.
3. Organize a playground patrol to insure safe conduct in play areas.

**UNIT 16**

**PROJECT: CAMPING AND HIKING SAFETY**

Objective: To make students aware of the hazards they might encounter while camping or hiking and how to avoid these hazards.

Activities: 1. Teacher will lead discussion of hazards that might be encountered. Insects can make miserable even the finest camping trip or hike. Help the children identify a list of insect pests and what can be done to avoid each:

(a) House flies — screening, poisons, and fly traps are helpful, but taking away their breeding place is the best solution.

(b) Mosquitoes — repellents are effective on a short-term basis.

(c) Wasps and bees — use great caution when they are nearby.

(d) Ticks — repellents are helpful, but more important is avoiding places inhabited by ticks and carefully checking for ticks.

(e) Scorpions, spiders, centipedes — Check your shoes each morning; be cautious in rocky and brushy places.

(f) Chiggers — don't sit on logs, keep clear of brush and leaves, and use plenty of repellent.

2. Poison ivy and poison oak are the most common types of plants that may cause intense itching with reddening and blistering of the skin and soon after this, open water blisters that itch terribly and can lead to further infections. Help the children identify these plants with the aid of a picture from an encyclopedia or other source and caution them to avoid contact.

3. Poisonous reptiles can be a source of injury in the outdoors. The teacher should help the students identify the most common types of poisonous snakes in South Carolina (rattlesnakes, copperhead, water moccasin). Avoid environments where these snakes might live.

4. Sunburn is the most common type of heat exposure and can be extremely serious. Children should be advised that adequate clothing and skin preparations will reduce or slow down the burning. Heat exhaustion can be prevented by proper rest.

5. The danger of falling on hiking trails can be reduced by not running and wearing shoes that have non-slip soles and good ankle support.

6. During a thunderstorm, students should know that lightning can be very dangerous. Help the children identify places to avoid such as under a tree, in a metal canoe on an open lake, or on an open mountaintop.

7. Many people today go camping in trailer parks or national or state parks, and often just as close to the next camper as possible. In this environment, being struck by an automobile or other vehicle is a significant hazard. Children should be made aware of this danger and exercise the same caution that they would in any traffic situation (i.e., looking both ways, etc.).

8. Forest fires can be caused by smoking or camp fires that get out of control. Children should discuss the prevention of such fires:
   (a) Don't build fires when the wind is too high.

   (b) Always clear the area in which you are going to build a fire.

   (c) Help others make sure that smoking material is completely extinguished.

9. One of the major attractions of the outdoors is animals. However, children should be cautioned to stay clear of bears, deer, porcupines, skunks, raccoons, foxes, and other animals.

**UNIT 17**

**PROJECT: SCHOOL BUILDING SAFETY**

Objective: To increase student awareness of responsibility toward total school safety.

Activities: 1. Distribute questionnaires to your students.

(a) Hall Safety

- Do students walk to the right in the halls?
- Are bannisters or tape used to separate traffic on the stairs?
- Are halls and stairs well lighted?
- Do students run in the halls?
- Do students run up and down stairs?
- Are lockers kept closed when not in use?
- Are lockers kept in good condition?
- Is courtesy practiced at lockers?

(b) Cafeteria Safety

- Do students crowd into the cafeteria?
- Do students push in line?
- Are spills cleaned up immediately?
- Are mats provided in wet weather to keep students from slipping?

- Are chairs pushed under the tables when students finish eating?
- Is courtesy practiced by students as they select a chair?

(c) Bathroom Safety

- Are bathroom floors kept clean and dry?
- Do students turn spigots off after washing hands?
- Is soap kept in the soap dish or on the lavatories?

(d) Classroom Safety

- Do students ever pull chairs out from under each other?
- Do students carry sharp pencils in their pockets?
- Are floors kept clean and unlittered?
- Do students ever throw sharp pencils or other objects across the room?
- Are pointed scissors carried with points pointed down?
- Are books kept on desks or in shelves?

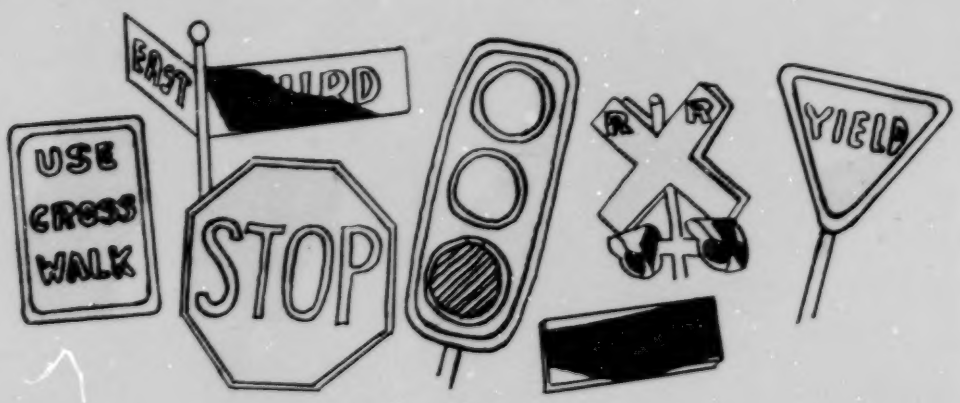
2. Ask students to report anything that would be considered a safety hazard. Examples:
   (a) Broken glass on playground
   (b) Play equipment that needs repair
   (c) Splintered handrails
   (d) Pranksters or bullies who find fun in hurting others.
3. Ask each student to write suggestions for making the school a safer place; compile the results. Present the list to the principal for approval.
4. Does the school practice tornado drills?
5. Construct a bulletin board to remind students of safe school conduct.
6. Show Films: "Safe Living at School"
   "Safety on Playground"

**UNIT 18**

**PROJECT: WALKING, JOGGING, SIGN RECOGNITION**

- There are many ways boys and girls can help to lessen dangers and help prevent accidents.
- Thoughtfulness of others is a good safety rule because a person who is thoughtful of others is usually not careless about himself.

Objectives: 1. To help the students develop an awareness of dangers on the streets.
2. To help the students learn the importance of different signs used in traffic.
3. To help students develop safe walking and running habits which will result in safe behavior habits.
4. To help students assume responsibility for their own safety.



Concepts:

1. There are many signs which we must obey while walking and running.
2. Never walk or jog in streets or highways. Stay on sidewalks or paths.
3. When you must walk in streets or highways, walk facing the traffic and step aside whenever cars approach.
4. Cross the street only at intersections or crosswalks.
5. Obey traffic signals even if traffic is nct approaching.
6. Do not step into streets from between parked cars.
7. Never run and play in the streets.
8. Wear light colored clothing when walking on dark days or at night.
9. Keep your umbrella over your head, not over your eyes.
10. Wait on the curb, not in the street, for cars to pass.
11. Be on the alert for all vehicles and animals.
12. Be cautious on wet or icy pavements.

Activities:

Level One — Pri.nary

1. Construct a large traffic sign and have each child make his own. Directions: Cut a 5 x 8 inch shape from brown construction paper. Cut three 1½ inch circles from this. Cut three 1½ inch circles from red, yellow, and green paper. Lay the 5 x 8 inch shape over the three circles with the colors showing. Glue the circles and the edges (long sides only) to the yellow paper. Cut a 3 x 12 inch strip of brown paper. In the middle of this, cut a 1½ inch circle. Slide this strip up and down and the traffic light will change colors.
2. The teacher can make or purchase large signs (Stop, Go, Caution . . .) which children are likely to encounter in everyday living. These can be placed around the room or a bulletin board can be made frcm them. Throughout the week each child can select one card and say, "I am a stop sign, I tell people in cars to stop."
3. Draw a diagram of street intersections on the playground. Several of the children can be cars, traffic signs, pedestrians and others directing the traffic.

Level Two — Middle Grade

1. Make signs (Keep to Right, Yield, Entrance, Walk, Exit, Stop . . .) and place them in the school halls as reminders to other children.
2. A discussion of several safety signs can be the subject of experience charts or may be used to write safety stories in language arts.
3. Each child can make a collage of walking, jogging, signs and safety.

Level Three — Upper Grade

1. Students can participate in a Safety Poster Contest with ribbons as first, second and third places. These can be displayed in the classroom. Other classes can be invited to see the posters. Later they can be placed in the halls as constant reminders of safety.
2. If no school safety patrol exists in your school, organize one with the aid of your police department. A patrol can go with the primary grades and their teacher into the surrounding neighborhoods, paying special attention to safety hazards.
3. A policeman can be invited to speak to the class on safety.

**UNIT 19**

**PROJECT: SEVERE WEATHER SAFETY**

Objective: To make students aware of the various severe weather warnings and the personal safety rules which should be followed.

Activities:

1. Teacher will lead a discussion of the various severe winter weather warnings which might be issued by the National Weather Service.
   (a) Heavy snow warning — a fall of 4 inches or more is expected in a 12-hour period, or when a fall of 6 inches or more is expected in a 24-hour period.
   (b) Blizzard warning — wind speed is at least 35 M.P.H., the temperature well below freezing, and the visibility is reduced by snow to ¼ of a mile or less.
   (c) Ice storm, freezing rain, and freezing drizzle — a coating of ice is expected on the ground and cn other exposed surfaces. The term "heavy" means extra weight of ice which will cause significant damage to trees, overhead wires, and the like.
   (d) Sleet storm — frozen rain drops (ice pallets) which bounce when hitting the ground or other objects.
   (e) Travel advisory — driving will be difficult because of blowing or drifting snow, freezing rain or drizzle, sleet, or strong winds.
   (f) Cold wave warning — expected rapid fall in temperature within a 24-hour period which will require substantially increased protection.
   (g) Wind-chill factor — shows the combined effects of wind and temperature as equivalent calm-air temperatures, i.e., describes the cooling power of the air on exposed flesh.
2. Teacher will discuss with the class the following basic personal safety rules which should be followed during severe winter weather.
   (a) Keep ahead of a winter storm by listening to the latest weather advisories and bulletins on radio and television.
   (b) Dress to fit the weather. If you spend much time outdoors, wear loose-fitting, lightweight, warm clothing in several layers. The layers of clothing can then be removed to prevent perspiring and chilling. Outer garments should be tightly woven, water-repellent, and hooded. Entrapped, insulating air, warmed by body heat, is the best protection against cold. Mittens, snug at the wrists, are better protection than fingered gloves.
   (c) Walk on snow with caution — a moderate pace with weight well balanced to decrease the danger of falling. If you are falling, relax to lessen the danger.
   (d) Ice must freeze to a thickness of at least 2 inches, or 4 inches for a group of people, before it is safe for ice skating.
3. Teacher will discuss with the class the following basic personal safety rules which should be followed during severe heat waves.
   (a) Drink adequate amounts of water and increase the intake of salt.
   (b) Restrict your activity and avoid strenuous exercise or manual labor.
   (c) Try to protect yourself from exposure by staying in an air-conditioned or well ventilated room.
   (d) Eat moderately during heat waves.
   (e) Wear loose fitting and light colored clothing in hot, sunny weather.
4. Teacher will discuss with class the symptoms of heat injury and how the body reacts to heat.
   (a) Dizziness, headaches, excessive fatigue and the loss of orientation are indication that a person is in danger.
   (b) The three common types of heat injury are strokes, cramps and exhaustion.

- Heat strokes are the most severe and can cause death. A complete breakdown of the body's regulatory system causes the victim to go into a deep coma. The first step is to lower the victim's body temperature and get emergency medical assistance.
- Heat cramps caused by dehydration through sweating, are painful but not as serious. The pains usually occur in the calves and abdomen. Rest and fluid relieve the problem.
- Heat exhaustion symptoms include a rapid but strong pulse and moist skin, either hot or cold. Ice water, salt solution, even soda, should be given if the person is conscious. Cold water splashed on the body and fanning also helps.

## COLD WAVE

Cold waves are another common form of winter storm. A cold wave warning indicates an expected rapid fall in temperature within a 24 hour period which will require substantially increased protection to agricultural, industrial, commercial, and social activities. The temperature falls and minimum temperatures required to justify cold wave warnings vary with the changing of the season and with the geographic location. Regardless of the month or the section of the country, a cold wave warning is a red flag alert to the public that during a forthcoming forecast period a change to very cold weather will require greater than normal protective measures.

## WIND CHILL (EQUIVALENT TEMPERATURES)

How cold will you feel?

The temperature of the air is not always a reliable indicator of how cold a person will feel outdoors. Other weather elements, such as wind speed, relative humidity and sunshine (solar radiation), also exert an influence. In addition, the type of clothing worn, together with the state of health and the metabolism of an individual also will have an influence upon how cold he will feel. Generally, "coldness" is related to the loss of heat from exposed flesh; it can be assumed to be proportional to the measured rate of heat loss from an object.

Wind Chill Equivalent Temperature Table below gives equivalent temperatures for various combinations of wind and temperature. As an example, a combination of 20°F. and a 10 mph wind has the same cooling power as a temperature of 3°F. and a wind speed of 4 mph.

The next time you want to know how cold it is outdoors, go ahead and check that thermometer! But keep in mind that other things (wind speed, state of nourishment, individual metabolism and protective clothing) all help to determine how "chilly" you feel at a given time and place.

WIND CHILL

Equivalent Temperatures (°F)

| WIND VELOCITY (MPH) | 45 | 40 | 35 | 30 | 25 | 20 | 15 | 10 | 5 | 0 | −5 | −10 | −15 | −20 | −25 | −30 | −35 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 45 | 40 | 35 | 30 | 25 | 20 | 15 | 10 | 5 | 0 | −5 | −10 | −15 | −20 | −25 | −30 | −35 |
| 5 | 43 | 37 | 32 | 27 | 22 | 16 | 11 | 6 | 0 | −5 | −10 | −15 | −21 | −26 | −31 | −38 | −42 |
| 10 | 34 | 28 | 22 | 16 | 10 | 3 | −3 | −9 | −15 | −22 | −27 | −34 | −40 | −48 | −52 | −58 | −64 |
| 15 | 29 | 23 | 16 | 9 | 2 | −5 | −11 | −18 | −25 | −31 | −38 | −45 | −51 | −58 | −65 | −72 | −78 |
| 20 | 26 | 19 | 12 | 4 | −3 | −10 | −17 | −24 | −31 | −39 | −46 | −53 | −60 | −67 | −74 | −81 | −88 |
| 25 | 23 | 16 | 8 | 1 | −7 | −15 | −22 | −29 | −36 | −44 | −51 | −59 | −66 | −74 | −81 | −88 | −96 |
| 30 | 21 | 13 | 6 | −2 | −10 | −18 | −25 | −33 | −41 | −49 | −55 | −64 | −71 | −78 | −86 | −93 | −101 |
| 35 | 20 | 12 | 4 | −4 | −12 | −20 | −27 | −35 | −43 | −52 | −58 | −67 | −74 | −82 | −89 | −91 | −105 |
| 40 | 19 | 11 | 3 | −5 | −13 | −21 | −28 | −37 | −45 | −53 | −60 | −69 | −76 | −84 | −92 | −100 | −107 |
| 45 | 18 | 10 | 2 | −6 | −14 | −22 | −30 | −38 | −48 | −54 | −62 | −70 | −78 | −86 | −93 | −102 | −109 |

WIND VELOCITY (MPH)

**UNIT 20**

**PROJECT: IN HOME SAFETY**

- More accidents happen at home than anywhere else. Most home accidents occur because someone carelessly broke a simple safety rule.

Objectives: 1. To make the students aware of hazardous situations in the home, therefore avoiding accidents.

2. To teach alertness, laying the groundwork to prevent accidents.

Concepts: 1. All stoves in the home, including the cooking stove are very dangerous. Have a fire extinguisher available. Keep baking soda near cooking stove in case of a grease fire. Never use water or flour.

2. Wipe up spills immediately.
3. Keep pot handles turned from edge of stove.
4. Keep cupboard doors closed.
5. Keep knives in a safe place, either a drawer or holder.
6. Keep matches away from the stove, fire and small children.
7. Keep poisonous cleaning materials and medicines away from foods and small children.
8. When a glass object is broken, ask a grown up to help you clean it up carefully and immediately.
9. Do not climb on tables, chairs or boxes to reach high objects. Use a sturdy stepladder.
10. Use non-slip pads in the tub or shower.
11. Keep electrical objects (radios) out of and away from the bathroom tub, sink or kitchen sink where you are likely to get a shock.
12. Use plastic containers (shampoo) in the bathroom.
13. Turn on and check the water temperature before getting into the shower.
14. Leave easy passage between furniture.
15. Use non-slip scatter rugs.
16. Keep hallways clear of furniture.
17. Halls and stairways should be well lighted.
18. Keep stairways clear of toys or other objects which may cause a fall.
19. Cover the fireplace with a firescreen.
20. Ashtrays should be deep and emptied, but only when ashes are cold or into a metal container
21. Do not sit on window sills, lean out windows or tilt back on chairs.
22. Have strong hooks on screens.
23. Keep drawers closed.
24. Keep the yard free of broken glass, rubbish, sharp pointed tools, hoes, rakes and ladders.
25. Put away bicycles, skates, small tools, nails and bottles after use.
26. Before mowing, clear the yard of rocks and trash, and stay away from mowing areas.
27. Never mow a wet lawn. You may slip and fall. If using a power mower, the wet lawn is dangerous. WEAR SHOES when mowing.
28. Keep baby's crib closed.
29. Keep plastic bags and small or sharp objects away from baby brother or sister.
30. Kerosene and gasoline should be stored in metal container outside of the house.

31. Clean attic and basement of clutter and rubbish.
32. Keep emergency phone numbers (police and fire department) close to the telephone.

Activities:

Level One — Primary

1. Make a check list of pictures or drawings for each child to take home. These can be pictures the children have found themselves. Look for danger areas at home and he will talk with his parents about the things he has found. He will report his findings to the class and tell what has been done or will be done.
2. Have pictures of safety hazards which can be found in the home posted in the class. Each child can find one hazard and tell the class about it.
3. The children will look up in class some pictures of dangers in the home. He could find pictures at home and bring them to class. Put the child's name under his picture and invite other classes in to look at them.

Levels Two — Three — Middle — Upper Grades

1. Have each child bring a newspaper clipping of a home accident to class, or they may use newspapers or magazines in class to find articles. Share their articles with the class.
2. The teacher can make a bulletin board showing normal activities going on in the home. On the other side of the board can be shown safety hazards (maybe 10). The children are to look at the pictures and write as many hazards as they see. The one who finds the most is the winner and gets to point them out to the class.
3. Make a check list for each child to take home and spot danger areas. He should report his findings to his parents and to the class where he will tell what has been done or will be done to make the home a safe place.

**UNIT 21**

**PROJECT: FRACTURES**

Objective: To teach students the importance of knowing what to do with victims that have fractures.

Concepts:
- Keep the injured bone and limb from as little movement as possible.
- If a wound is also present, it should be treated.
- Many objects can be used to splint a broken bone (something light and portable — Example: rolled up magazines).
- The body must be immobile in case of back and head injuries.

Activities:
1. Select one student as a victim of an accident, and have him role-play a specific injury. The teacher can set the scene of the accident which will give the first aider clues as to what is the nature of injury to the victim.
2. Have the class divide into groups (as small as possible) and make splints and bandages out of anything they can find.
3. Have the class put splints on one another.
4. Treat for shock by:
   - keep victim lying down
   - maintain body warmth by covering with blanket
   - raise feet so that they are slightly higher than the head

NOTE: In conjunction with all First Aid Units teachers are referred to the American National Red Cross First Aid Textbook.

**UNIT 22**

**PROJECT: BLEEDING**

Objective: To teach students what to do when there is bleeding.

Concept: The first step to control severe bleeding is to apply direct pressure on the wound, either with a cloth or with your bare hand. Then, raise the wounded part of the body above the level of the victim's heart. If a thick piece of cloth is available, use it to cover the wound, and then apply pressure over the cloth with the palm of your hand or with your fingers. The cloth or dressing will help absorb the blood and allow it to clot. If the blood soaks through the cloth, don't remove it. Add another layer of cloth over the first dressing and continue to apply pressure with your hand. You can substitute a pressure bandage for direct hand pressure on the wound. Place the bandage directly over the cloth dressing; wrap both ends of the bandage firmly around the wound. Then keep the injured part of the body raised above the level of the victim's heart. Elevating the limb will slow the flow of blood to the injured area and help limit the bleeding. If this is not sufficient to stop the bleeding then you should apply pressure at the proper pressure point. If this doesn't work, a *last resort* is a tourniquet. A tourniquet cuts off all circulation and should only be used to save the victim's life. Once it is applied only the doctor should take it off. Be sure to put a T on the victim in an obvious place.

Activities:
1. Have the students apply these techniques to one another.
2. Have the students go home as an assignment and go through these same procedures with their family.
3. Have a group discussion on the human heart.
   (a) How much blood is in the body?
   (b) How much you can lose before death occurs?
4. Emphasize the importance of knowing what to do and how to do it quickly.

NOTE: In conjunction with all First Aid Units teachers are referred to the American National Red Cross First Aid Textbook.

**UNIT 23-A**

**PROJECT: POISON FIRST AID**

Objective: 1. To teach students to recognize signs and symptoms of poisoning.

2. To teach students what steps should be taken in case of poisoning.

Concepts: 1. Poisoning by mouth, signs and symptoms

(a) Symptoms vary greatly

(b) Suspicion that a poisonous substance has been swallowed may be based on

- Information from the victim or from an observer
- Presence of a container known to have contained a poisonous substance
- The sudden onset of pain or illness
- Burns around the lips or mouth
- A chemical odor on the breath
- The pupils of the eyes contracted to a pinpoint or unusually dilated

2. First Aid for Conscious Victim

(a) Dilute the poison by having the victim drink a glass of water or milk, if victim is conscious and not having convulsions. Discontinue if this makes the victim nauseous.

(b) Save the label or container of the suspected poison for identification. If the victim vomits, save a sample of the vomited material for analysis.

(c) Seek medical assistance by calling the poison control center or a doctor.

(d) If the victim becomes unconscious, keep his or her airway open. Give artificial respiration or cardiopulmonary resuscitation (CPR) if indicated. Call an emergency squad as soon as possible.

3. First Aid for Unconscious Victim

(a) Maintain an open airway.

(b) Call for an emergency squad as soon as possible.

(c) Administer artificial respiration and CPR, if indicated.

(d) Save the container of a suspected poison.

(e) If victim has vomited, save a sample of vomited material.

(f) Do not give fluids to an unconscious person.

(g) Do not induce vomiting to an unconscious person. If victim is vomiting, position him or her and turn the head so that the material drains out of the mouth.

4. Revised recommendations as set by the American National Red Cross and the state poison control center staff.

(a) Do not induce vomiting unless advised to do so by the poison control center or by a doctor.

(b) If recommended that vomiting be induced, the following procedures are suggested:

- Administer a dose of Syrup of Ipecac — one tablespoonful for children and two tablespoonsful for adults, followed with one or two glasses of water.
- If victim is a small child, the child should be placed across your lap with the head lower than the hips. An adult should also make sure that the head is lower than the hips.
- When Ipecac is not available follow exactly the instructions received from the Poison Control Center.

(c) Instructions on container labels.

The instructions on product labels for the specific treatment of poisoning caused by the product may be wrong. Specific antidotes should be administered only on the advice of the poison control center or a doctor.

Activities:
1. Have a student role-play accidentally swallowing a petroleum based poison and have the students assist him.
2. Develop a procedures chart for everyone in the class to take home to study and post.
3. Make an inventory of school or home of all poisons that are accesible to children.
4. Make students familiar with the Palmetto Poison Center, the poison control center for the State of South Carolina.
   - Statewide, toll free number of Palmetto Poison Center, 24 hours a day, everyday. 1-800-922-1117
   - Number of Palmetto Poison Center for Columbia telephone area only. 765-7359
5. Interested students may write for Mr. YUK self-adhesive stickers to place on poison containers.

   Palmetto Poison Center
   University of South Carolina
   College of Pharmacy
   Columbia, South Carolina 29208

NOTE: In conjunction with all First Aid Units teachers are referred to the American National Red Cross First Aid Textbook.

Teachers are especially referred to the latest procedures in the pamphlet: "First Aid for Poisoning." American National Red Cross, May, 1977.

# IN CASE OF POISONING CALL IMMEDIATELY

PALMETTO POISON CENTER

STATEWIDE (TOLL FREE) 1-800-922-1117

COLUMBIA AREA ONLY 765-7359

FAMILY DOCTOR _____ OFFICE PHONE _____

HOME PHONE _____

FATHER'S NAME _____ WORK PHONE _____

MOTHER'S NAME _____ WORK PHONE _____

STUDENT _____ HOME PHONE _____

DO NOT INDUCE VOMITING

UNLESS ADVISED TO DO SO BY POISON CONTROL CENTER OR YOUR DOCTOR

1. DILUTE THE POISON BY HAVING THE VICTIM DRINK A GLASS OF WATER OR MILK, IF THE VICTIM IS CONSCIOUS AND NOT HAVING CONVULSIONS. DISCONTINUE DILUTION IF IT MAKES THE VICTIM NAUSEOUS.
2. SAVE THE LABEL OR CONTAINER OF THE SUSPECTED POISON FOR IDENTIFICATION. IF VICTIM VOMITS, SAVE A SAMPLE OF THE VOMITED MATERIAL FOR ANALYSIS.
3. SEEK MEDICAL ASSISTANCE BY CALLING THE POISON CONTROL CENTER OR A DOCTOR.
4. IF THE VICTIM BECOMES UNCONSCIOUS, KEEP HIS OR HER AIRWAY OPEN. GIVE ARTIFICIAL RESPIRATION OR CARDIOPULMONARY RESUSCITATION (CPR) IF INDICATED. CALL AN EMERGENCY SQUAD AS SOON AS POSSIBLE.

OTHER IMPORTANT NUMBERS

BEST FRIEND _____ _____ PHONE _____

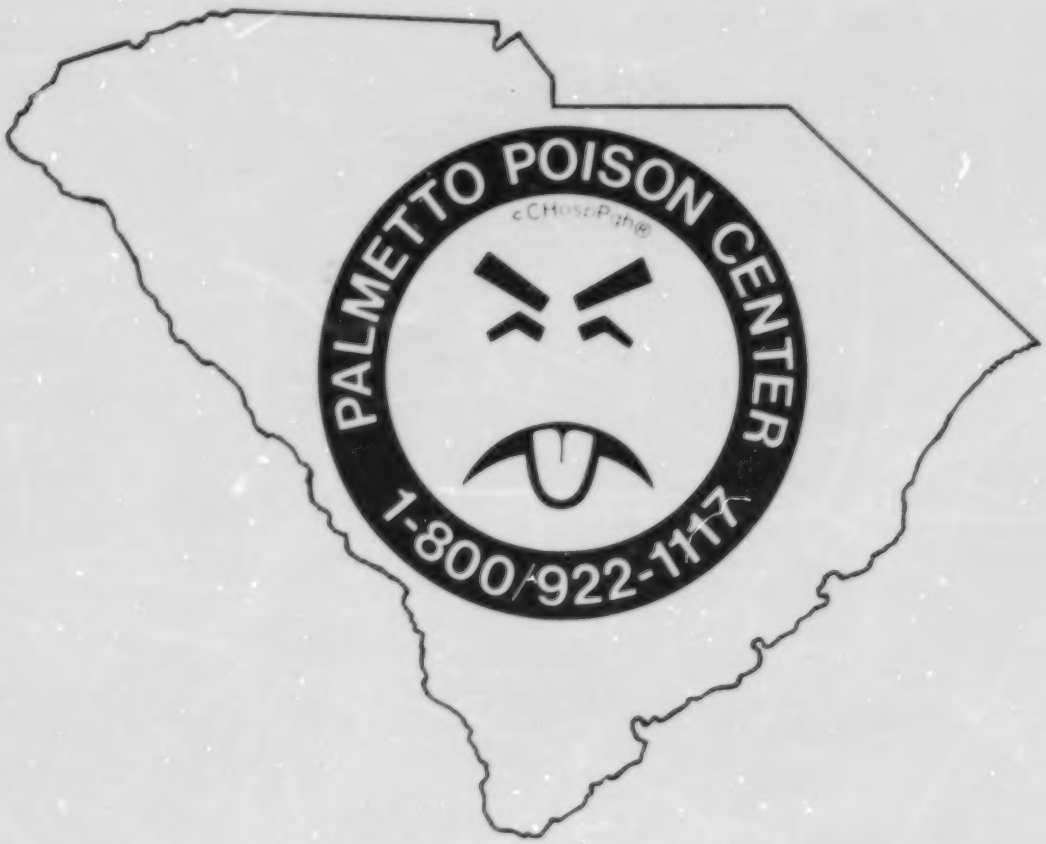
FIRE DEPARTMENT PHONE _____

POLICE DEPARTMENT PHONE _____ 47

## PALMETTO POISON CENTER

The Palmetto Poison Center represents a Regionalized and Standardized Program of Poison Information and Treatment for the State of South Carolina.

The Palmetto Poison Center is a consortium composed of Richland Memorial Hospital and the College of Pharmacy, USC. It has been designated by the South Carolina Department of Health and Environmental Control as the Regional Poison Center for South Carolina.




## MR. YUK — The Poison Warning Symbol

This copyrighted design is produced as a sticker to be affixed to dangerous products in homes and schools. Each Mr. Yuk sticker carries the emergency telephone number of the Palmetto Poison Center which serves the State of South Carolina.

Interested students may write for Mr. Yuk self-adhesive stickers to place on poison containers to:

Palmetto Poison Center
University of South Carolina
College of Pharmacy
Columbia, South Carolina 29208

**UNIT 23-B**

**PROJECT: POISON**

Objectives: To make students aware of common poisons in and around the home, including poison plants.

Information for the teacher:

- Household cleaners, repair materials (glue, paints, paint thinners, etc.) decorative plants may hold potential dangers for students unaware of their poison effects.
- Mixing cleaners can result in a chemical reaction that may cause fatal results, students must be advised of this danger (example — Ammonia with chlorine cleaners).

Activities:

1. Have students check their homes, list all poisons or copy labels from these materials and make a poster. Underline all CAUTIONS. Example — Mixing Ammonia cleaners with chlorine cleaners. (See Poison Proofing Checklist pages 46-48).
2. Have students look through magazines and cut out pictures of poisonous chemicals used in the house and yard.
3. For young pupils show the film "Sniffy Escapes Poisoning". This is excellent for preschool and primary pupils. Shows the dangers of overdose of medicines. State Department of Education Audio Visual Library. Then discuss.
4. Discuss never to take medicines unless prescribed by their doctor.
5. Have students collect pictures of poisonous plants including poison ivy, oak and sumac (these may cause severe skin inflammation and water blisters). Refer to a list of poisonous plants around and in the home. Discuss the conditions under which they may be harmful. See Resources.

   (a) Internal: Stress importance of avoiding putting plants or fingers in the mouth after handling.

   (b) External: Point out symptoms associated with plant poisoning.

   - redness of skin
   - small blisters
   - blisters
   - swelling
   - fever

NOTE:

- Stress the importance of avoiding direct contact with plants or indirect contact by smoke from burning plants. Be sure students know the danger of burning poisonous plants. Their toxic fumes may infect a person causing the same symptoms as direct contact.

6. Have students interview a pharmacist, doctor or a nurse to obtain the names of over-the-counter lotions beneficial to treating poison ivy, poison oak or sumac.
7. Other students may interview the school nurse to obtain a list of antidotes for common household poisons.
8. Have students design a logo to warn small children of poisonous materials.
9. Go outside in the school yard and look for poisonous plants in and around the property.
10. Make a model medicine cabinet. Include models of common items usually found there. Put a poison symbol on your models that are poisonous.
11. Create symbol that indicates that although not poisonous the substance should not be eaten.
12. Look through newspapers and magazines for stories and/or pictures that are about poisonings. Discuss prevention of accidental poisoning.
13. Interview a local botanist about poisonous plants and how to identify them.
14. Reproduce list of common poisons of children, page 49 for distribution.
15. Reproduce "In Case of Poisoning" form to be sent home to each family. Page 40.
16. Have students take home Poison Proofing Checklist to be completed. Page 46-48.
17. Give the suggested pretest on next page.

NOTE: In conjunction with all First Aid units teachers are referred to the American National Red Cross First Aid Textbook.

**PRETEST — Administer either orally or written**

1. Children under the age of five are accidentally poisoned more often than any other age group.
   _____ True _____ False

2. Thousands of small children are poisoned each year by common household products.
   _____ True _____ False

3. Only substances with a "Caution — Poison" label on them can harm a small child.
   _____ True _____ False

4. A three-year-old child cannot get into a medicine cabinet above the bathroom sink.
   _____ True _____ False

5. Mixing ammonia with bleach forms a very irritating gas.
   _____ True _____ False

6. All medications can be used for as long as they last.
   _____ True _____ False

7. It makes no difference if you take medicine with the lights on or with the lights off.
   _____ True _____ False

8. It is fine to put leftover household cleaning products into soft drink bottles as long as you put a label on the bottle.
   _____ True _____ False

9. A potential poison is:
   (a) a product that is labeled "Poison"
   (b) a liquid that is harmful only to children
   (c) any substance that is abused
   (d) all of the above

10. Potential poisons include:
   (a) aspirin substitutes
   (b) ammonia products
   (c) household cleaning products
   (d) all of the above

11. A cover for containers of household products and medications which is designed for safety is a:
   (a) pop-top
   (b) child-resistant cap
   (c) screw lid
   (d) bottle cap

12. A poison control center:
   (a) controls the sale of poisons
   (b) gives information about hazardous household products and medications
   (c) recommends first-aid treatment for poisoning victims
   (d) does both B and C

13. Syrup of Ipecac:
   (a) is a type of cough medicine
   (b) makes a person vomit
   (c) neutralizes poisons
   (d) is put on burns



5i

Mystery Exercise:

Materials needed: A dozen empty containers such as aspirin bottles, laundry detergent containers, soft drink bottles, and other glass and plastic containers. Remove the labels. Fill each container with tinted water, syrups, beverages, and pill shaped candies.

Procedure: Pass around containers and allow each participant to guess what they originally held and what they hold now. This shows how easily a child will mistake the contents by the container.

Film Exercise:

After viewing the film *The Travels of Timothy Trent*, or other film, instead of asking if any questions, have each student write down a one word feeling they have after viewing the film. Then share these feelings and the person tell what in the film made them feel this way.

Is This Product Really Necessary?

Have students go home and list 10 helpful or time-saving products and medications which are used frequently in your home. Then have the students rate each item:

\+ you really need
– you can do without
* you could (and should) keep under lock and key
T could (and should) throw away

Group Discussions:

Pass out sentence stubs and have each student complete and then share with group.

A potential poison is .....
Potential poisons found in my garage are .....
Potential poisons found in my kitchen are .....
In the event of accidental poisoning I would .....
Ammonia may be hazardous because .....
A good thing to remember about nonprescription medications is .....
Over-the-counter antihistamines include .....
If I can do one thing for poison prevention I would .....
Syrup of Ipecac is used for .....
Potential poisons found in bedrooms are .....
Potential poisons found in the bathrooms are .....
Potential poisons found in the dining room or living rooms are .....
Some household products that contain petroleum distillates are .....
My house is poison-safe because .....

A Behavior I Would Like to Change:

List a behavior of yours relating to potential poisons that you would like to change. Describe how present behavior could result in an accident.

Poison Prevention:

Select one room at home and list potentially poisonous products that are stored in that room and specifically where they are located. Then list ways to correct the hazardous situation.

U.S. Consumer Product Safety Commission

# Poison Proofing Checklist[1]

THIS CHECKLIST SHOULD BE COMPLETED WITH AN ADULT.

Is your home poison-proof? If it's not, someone may get hurt — and soon. But it's easy to poison-proof your home. Help your parents use this checklist. Whatever you answer "no" should be fixed quickly.

## Poison-Proofing the Kitchen

| | Yes | No |
|---|---|---|
| 1. Do all harmful products in the cabinets have child-resistant caps?<br>Products like furniture polishes, drain cleaners and some oven cleaners should have safety packaging to keep little children from accidentally opening the packages. | ☐ | ☐ |
| 2. Are all potentially harmful products in their original containers? There are two dangers if products aren't stored in their original containers. Labels on the original containers often give first aid information if someone should swallow the product. And if products are stored in containers like drinking glasses or soft drink bottles, someone may think it is food and swallow it. | ☐ | ☐ |
| 3. Are harmful products stored away from food? If harmful products are placed next to food, someone may accidentally get a food or a poison mixed up and swallow the poison. | ☐ | ☐ |
| 4. Have all potentially harmful products been put up high and out of reach of children? The best way to prevent poisoning is making sure that it's impossible to find and get at the poisons. Locking all cabinets that hold dangerous products is the best poison prevention. | ☐ | ☐ |

[1]Adapted from "Poison Lockout Checklist," U.S. Consumer Product Safety Commission.

# Poison-Proofing the Bathroom

| | Yes | No |
|---|---|---|
| 1. Did you ever stop to think that medicines could poison if used improperly?<br>Many children are poisoned each year by overdoses of common, non-prescription medications. Just think of how many potential poisons might be in your medicine cabinet. | ☐ | ☐ |
| 2. Do your medications and other potentially harmful products have child-resistant packaging? Many medications and household products come with child-resistant caps. Check to see yours have them. | ☐ | ☐ |
| 3. Have you thrown out all old medicines?<br>As medicines get older, the chemicals inside them can change. So what was once a good medicine may now be a dangerous poison. Flush all old medications down the toilet. Rinse the container well and throw it away. | ☐ | ☐ |
| 4. Do you always give medicine only to the person the doctor prescribed it for?<br>The medicine that worked wonders on one person may harm the next. Give drugs only to the person the doctor told you to give them to. | ☐ | ☐ |
| 5. Are all medicines in their original containers with the original labels?<br>Prescription medicines may or may not list ingredients. The prescription number on the label will, however, allow rapid identification by the pharmacist of the ingredients should they not be listed. Without the original label and container, you can't be sure of what you're taking. After all, some pills look a lot like poisonous roach tablets. | ☐ | ☐ |

# Poison-Proofing the Garage or Storage Area

| | Yes | No |
|---|---|---|
| 1. Did you know that almost everything in your garage or storage area that can be swallowed is a terrible poison? Violent, horrible reactions occur to people who swallow such everyday substances as charcoal lighter, paint thinner and remover, antifreeze and turpentine. | ☐ | ☐ |
| 2. Do all these products have child-resistant caps? | ☐ | ☐ |
| 3. Are they stored in the original containers? | ☐ | ☐ |
| 4. Are the original labels on the containers? | ☐ | ☐ |
| 5. Have you made sure that no potential poisons are stored in drinking glasses or soft drink bottles? | ☐ | ☐ |
| 6. Are all these harmful products locked up and out of sight and reach? | ☐ | ☐ |

When you can answer all the questions with a "yes," your house is poison-proofed. Then, to make sure your house stays poison-proof, when you buy potentially harmful products make sure they have child-resistant closures and keep these products out of sight and reach.

## Some of the Most Common Poisons of Children

COSMETICS

Cologne and Perfume
Nail Polish Remover (Acetone)

HOUSEHOLD PRODUCTS

Antifreeze
Arsenic (Pesticide)
Camphor
Chlorine Bleach
Rat Poison
Dishwasher Detergent
Drain Opener
Furniture Polish
Lye (Alkali)
Disenfectant
Mothballs
Turpentine

OTHER

Kerosene
Lead Paint
Liquor

DRUGS — OVER THE COUNTER AND PRESCRIPTION

Cold Remedies
Antihistamines
Decongestants
Eyedrops (Atropine)

STIMULANTS

Amphetamines

TOPICAL AND PRESCRIPTION

Appetite Suppressants
Aspirin
Digitalis
Hallucinogens (Illegal)
Muscle Relaxants
Peroxide
Prescription Central Nervous System Depressants (CND) — Refer to State Department
Prescription Central Nervous System Stimulants (CND) — Drug Education Guide
Rubbing Alcohol
Tranquilizers
Thyroid
Vitamin A
Vitamin D
Minerals
Iron

YARD AND FARM CHEMICALS

Herbicides — Weed Killers

## POISON PREVENTION FACT SHEET FOR PARENTS

1. Ninety percent of all poison cases reported involve children under five years of age. Medicines, household preparations, insect sprays, kerosene, lighter fluid, some furniture polishes, turpentine, paints, solvents, and products containing lye and acids are most frequently the cause of accidental poisoning among children.

2. Poisoning accidents generally occur because someone is careless. Young children will eat and drink almost anything. Keep all liquids and solids that may be poisonous out of their reach.

3. Aspirin is the most common cause of accidental poisoning in children. It is found in almost every home—in the bedroom, the bathroom, and the kitchen. Keep it out of sight and out of reach—even if it has a safety cap.

4. Never leave a bottle of aspirin or other pills out of place. Return to medicine cabinet or storage place immediately after use.

5. Since children tend to imitate adults—avoid taking medicine in their presence.

6. Always turn a light on when giving or taking medicine at night.

7. Never call medicine "candy." Children should not be deceived by hearing flavored medicines called "candy." When left alone, they may locate the bottle and eat or drink the contents.

8. Store medicines separately from other household products.

9. Clean out your medicine cabinet periodically. Get rid of old medicines by flushing them down the drain or toilet, rinsing the container in water, and then discarding it.

10. Keep food and household products separated. Cleaning fluids, detergents, lye, soap powders, insecticides, and other household products should be stored away from food and medications.

11. If a child is in the crawling stage, arrange to keep household products in places other than below the kitchen sink unless the cabinet is locked.

12. Keep all products in original containers. Never place kerosene, antifreeze, or paints in cups, glasses, milk or soft-drink bottles, or other utensils customarily used for food or drinks. If they cannot be stored in their original containers, keep them in properly labeled closed containers not quickly identifiable by children.

13. Be sure all products are properly labeled, and read the label before using.

14. Destroy old products. Pour contents down drain or toilet and rinse container before discarding. Never put container with its contents into refuse cans.

FIRST AID FOR POISONING

Keep Calm . . . Act Promptly
Call Palmetto Poison Center
1-800-922-1117
Tell them what happened
and the name of the product

**UNIT 24**

**PROJECT: BOATING SAFETY**

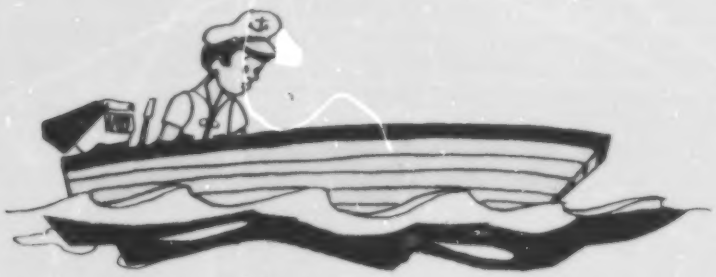
Objectives: 1. The student will be able to identify what preparations should be made before going boating.

2. The student will know how to act safely while entering and being a passenger on a boat.

3. The student will be aware of what to do in capsize emergency.

Concept: An understanding of safe boating practices is important.

Materials: Personal Flotation Device (PFD) from home.



Activities:

Preparation for Boating

1. Discuss with the students the following aspects of planning for an outing on a boat.
   (a) Anyone using a small boat should know how to swim in order to be reasonably safe.
   (b) Basic training in safety and correct boat handling is available from the Coast Guard Auxiliary, United States Power Squadrons, and American Red Cross Chapters.
   (c) Weather conditions and the forecast should be checked from sources such as the local newspaper, telephone, radio, or storm warning signals at marinas.
   (d) A "float plan" should be filed with a reliable relative, friend, or neighbor. WHERE are you going, WHO will be going, and WHEN are you coming back.
   (e) A Coast Guard approved personal flotation device (PFD) must be provided for each person on board. Non-swimmers and novices should wear their PFD at all times.
   (f) Help check to see if all other required and recommended safety equipment is aboard the boat.
2. Teacher ask students to contact local safe boating organizations to find out what safe boating courses are available locally. Make a list of training opportunities to be taken home.
3. Invite a local boating safety representative to give a talk and answer questions about boating safety.
4. Ask students to bring a PFD from home. Practice putting it on properly. Check them for safety.
5. Have the students write a sample "float plan".

Acting Safely While Entering and Being a Passenger

1. Discuss the following safety procedures with the class:
   (a) Enter the boat one at a time by staying low and stepping into the center of the boat.
   (b) The boat should not be overloaded with people and equipment.

(c) The load should be distributed as evenly as possible.

(d) Don't stand up in small boats.

(e) Avoid "horseplay" at all times in a boat.

2. Use the Red Cross boating safety poster to lead a discussion about safe boating procedures.
3. Ask the students to describe their last experience on a boat. Help the class analyze whether safe boating principles were followed.

What to do in a Capsize Emergency

1. Discuss the following two emergency procedures with the class:

   (a) If the boat capsizes, stay with the boat which will generally provide a floating support.

   (b) Put on your personal flotation device (PFD).

2. Organize a field trip to a local pool or lake for a boating safety demonstration.

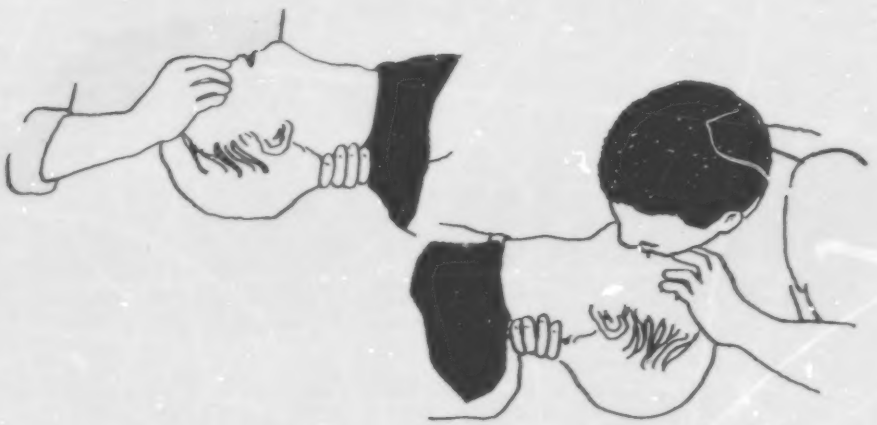
**UNIT 25**

**PROJECT: ARTIFICIAL RESPIRATION, MOUTH TO MOUTH RESUSCITATION**

Objective: To teach students to recognize when breathing has stopped and how they can help.

Concepts:

1. Several conditions might cause the stoppage of breath: drowning, electric shock, partial obstruction of breathing passages, overdose of depressant drugs, gas poisoning, or severe illnesses.
2. If a victim appears to be unconscious, tap victim on the shoulder and shout "Are you okay."
3. If there is no response tilt the victim's head, chin pointing up. Place one hand under the victim's neck and gently lift. At the same time, push with the other hand on the victim's forehead. This will move the tongue away from the back of the throat to open the airway. Immediately look, listen, and feel for air. Your cheek and ear should be close to the victim's mouth and nose. If the victim is still not breathing, then proceed with mouth to mouth.
4. Pinch the victim's nostrils together with your hand to prevent air leakage.
5. Seal your lips around the victim's mouth and blow air into him until you see his chest rise. If the chest doesn't rise there must be a blockage. If possible, turn the victim on his side and administer a sharp blow to the back. If this doesn't dislodge the object you will have to try to reach it with your fingers.
6. After you see the chest rise, remove your mouth after each forced breath, allowing the victim to exhale.



7. Continue inflation at about twelve times per minute for adults and twenty times per minute (using gentle puffs) for infants and small children. On small children you can force air through their mouth and nose at the same time. If the mouth is injured; you may seal it, and employ the mouth to nose technique following the above steps.

Activities: 1. Practice on dolls, manikins or each other in class. If you use one another, do everything except the actual contact with the mouth.

2. Send a step by step procedure form home to the parents and have everyone in the family practice and sign the bottom of the form. They then could keep the portion that has the steps on it and return the signed bottom portion for credit.

3. Let one or more groups role play while the rest of the class observes, evaluates and helps if necessary.

NOTE: In conjunction with all First Aid Units teachers are referred to the American National Red Cross First Aid Textbook.

**UNIT 26**

**PROJECT: TORNADO SAFETY**

Objectives: 1. To enable the student to list the characteristics of a tornado.

2. To enable the student to recognize tornado alerts and interpret them correctly.

3. To enable the student to take correct steps in the event of a tornado warning.

Concept: Responding correctly in the event of a tornado warning is important.

Materials: Colors or painting supplies

Activities:

Characteristics of a Tornado

1. Teacher leads a discussion about the following characteristics of a tornado.

(a) Local storm of short duration formed of winds rotating at very high speeds, usually in a counter-clockwise direction.

(b) Visible as a funnel-shaped vortex.

(c) Outer ring of rotating winds becomes dark with dust and debris as the storm moves along the ground.

(d) Form several thousand feet above the earth's surface usually during warm, humid, unsettled weather, and usually at the same time as a severe thunderstorm.

(e) The forward speed of a tornado averages 40 miles an hour, the width averages about a quarter of a mile, and the length is seldom more than 16 miles. Very unpredictable, however.

(f) Funnels usually appear as an extension of dark thunderstorm clouds and stretch downward to the ground. Some never reach the surface while others touch and rise again.

(g) Tornados can destroy solid buildings, make a deadly missile of a piece of straw, uproot large trees, and hurl people and animals for hundreds of yards.

(h) Several tornados occur each year in South Carolina (average of six). Tornados are most likely to occur in the Spring with April being the most likely month. Most tornados occur between noon and midnight, the warmest hours of the day, with the greatest likelihood between 4:00 p.m. and 6:00 p.m.

2. Students draw, color, or paint their ideas of what a tornado might look like.

Warning Signals

1. Teacher leads a discussion about the two types of tornado alert signals:

(a) A "tornado watch" means that a tornado is expected to develop. A "tornado watch" is issued to alert persons to the possibility of tornado development in a specified area, for a specified period of time. People in the watch area should not interrupt their normal routines except to watch for threatening weather. The National Weather Service will inform the public of such "tornado watches" by radio and television.

(b) A "tornado warning" means that a tornado has actually been sighted in the area or indicated by radar. Warnings indicate the location of the tornado at the time of detection, the area through which it is expected to move, and the time period during which the tornado will move through the area. When a "tornado warning" is issued, persons in the path of the storm should take immediate safety precautions.

Tornado Safety Rules

1. Teacher leads a discussion concerning what to do in the event of a "tornado warning."

(a) Seek inside shelter (in a tornado cellar or reinforced building) and stay away from windows. Curl up so that your head and eyes are protected. Keep a battery operated radio nearby and listen for further advisories.

(b) In homes, the basement offers the greatest safety. Seek shelter under sturdy furniture if possible. In homes without basements, take cover in the center part of the house, on the lowest floor, in a small room such as a closet or bathroom, or under sturdy furniture. Keep some windows open, but stay away from them.

(c) Mobile homes are particularly vulnerable to overturning during strong winds. Trailer parks should have a community shelter. A community leader should be appointed to monitor the radio during a tornado watch.

(d) In schools, students should be directed to an interior hallway on the lowest floor. Auditoriums and gymnasiums or other structures with wide, free-span roofs should be avoided. Students should know how to assume a protective position (crouched on elbows and knees with hands over back of head), facing an interior wall.

(e) In open country, move away from the tornado's path at a right angle. If there is no time to escape, lie flat in the nearest depression, such as a ditch or ravine.

2. Have your students proceed to the school's designated area and assume the protective position (crouched on elbows and knees with hands over back of head) facing an interior wall.

3. Have students discuss the best place to take cover in their own home with their parents. Have each student report to the class.

**UNIT 27**

**PROJECT: BURNS**

Objective: To teach students to recognize the types of burns and what to do for each.

- First Degree — Reddened skin. Immerse in cold water if possible. If not, cold, moist cloths will help ease the pain.
- Second Degree — Blistered. Treat as an open wound. Do not break blisters if possible. Blot dry after use of cold water and cover with a dry, sterile dressing.
- Third Degree — Deeper destruction than second degree and normally produces a white or charred appearance. Cover this burn with thick sterile dressings or a clean piece of cloth. Never use ointments of any kind because they may interfere with medical treatment.

Activities:
1. Choose a small group of students for a role-playing activity. Assign one or more students as victims, and decide what injuries they should pretend to have. The rest of the group should treat the injuries while the remainder of the class evaluates the methods of treatment.
2. Send home a test to be completed by parents and students. The questions could be made from the above information.
3. Inspect the school and homes for potential causes of fires and burns. Then decide what if anything could be done to eliminate these sources of danger.

NOTE: In conjunction with all First Aid Units teachers are referred to the American National Red Cross First Aid Textbook.

**UNIT 28**

**PROJECT: BITES AND STINGS**

Objective: To teach students what to do in the event of an unwanted bite.

Concepts:
1. Injuries produced by animal or human bites may cause punctures, lacerations, or even avulsions. Not only is care needed for open wounds, but also consideration must be given to the danger of infection, especially rabies.
2. Human bites may become seriously infected due to the heavy contamination of bacteria in the mouth. Cleanse and cover the wound and seek medical attention.
3. The bite of any animal may result in an open wound. A dog bite is likely to cause more extensive tissue damage than a cat bite, but the cat bite may be more dangerous. Many wild animals, especially bats, rats, and raccoons, transmit rabies. Tetanus is an added danger in animal bites. A bite on the face or neck should receive immediate medical attention. Every effort must be made to restrain any suspected rabid animal so that it can be kept under observation to determine whether or not it develops the final stages of rabies. Find out from local health authorities how long a live animal suspected of having rabies should be observed. Do not kill the animal unless absolutely necessary and take precaution not to damage the animal's head because the body will have to be examined for rabies. If a suspected rabid animal cannot be caught and identified or observed, arrange for immediate medical care for the victim.

   Thoroughly wash the wound with soap and water, flush the bitten area, and apply a dressing. Make sure that the victim avoids movement of the affected part until he has been attended by a physician.
4. Snakebites: The victim of snakebite must have prompt medical attention and be transported to the hospital as quickly as possible.
   (a) Meanwhile, keep the victim from moving around.
   (b) Keep the victim as calm as possible and preferably in a lying position.

(c) Immobilize the bitten extremity and keep it at or below heart level.

(d) If mild to moderate symptoms develop, apply a constricting band 2 to 4 inches above the bite, but not around a joint and not around the head, neck, or trunk. Mild to moderate symptoms are mild swelling or discoloration, mild to moderate pain at the site of the wound, tingling sensations, rapid pulse, weakness, dimness of vision, nausea, vomiting, and shortness of breath.

(e) If severe symptoms develop make an incision over each fang mark and apply suction immediately. Apply a constricting band if that has not already been done, and make cuts in the skin through the fang marks. Use a sharp sterilized knife. Cuts should be no deeper than just through the skin and should be ½ inch long, extending over the suspected venom deposit point. This is usually lower than the fang mark. Cuts should be made along the long axis of the limb. Do not make cross-cut incisions or cuts on the head, neck, or trunk. Apply suction with a suction cup for 30 minutes. If a suction cup is not available, use your mouth. There is little risk to the rescuer who uses his mouth, but it is recommended that the venom not be swallowed and that the mouth be rinsed out.

5. If a hospital cannot be reached in 4 or 5 hours, proceed as follows:

   (a) Keep trying to obtain professional care, either by transporting the victim or by using some type of communications system to obtain medical advice.

   (b) If no symptoms develop, keep trying to reach the hospital and give the general first aid described in steps (a), (b), (c).

   (c) If any symptoms at all develop, apply a constricting band, make incisions and apply suction immediately as described above in steps (d) and (e).

   If you can kill the snake without risk or delay, bring it to the hospital for identification. Cleaning is accomplished by washing the bitten area with soap and water and blotting it dry with sterile gauze. *Do Not* give the victim alcohol, sedatives, aspirin, or any medicine containing aspirin.

6. Persons who are allergic to insect stings need special attention.

Activities: 1. Show pictures of poisonous snakes and lead discussion as to habitat and precautions.

2. Role play a snake bite victim and let the students be the rescuers.

3. Role play a victim that has been bitten by an unfamiliar dog.

4. Discuss the problems of persons allergic to insect stings.

   (a) About eight in 1,000 people are allergic to insects and four of the eight are severely allergic. They can sink into anaphylactic shock quickly from a single sting.

   In fact, there are more fatalities annually due to insect stings or bites than to snakebite. Allergic reactions can result from many insects. But most are a result of *Hymenoptera:* bees, wasps, jellow jackets, ants, and hornets. Symptoms of allergic reactions vary with the severity.

   (b) Severe Reactions

   - Constriction of the throad and chest
   - Abdominal pain
   - Dizziness
   - Wheezing
   - Swelling

   (c) Very Severe

   - Labored breathing
   - Difficulty swallowing and hoarseness
   - Weakness

- Confusion
- Anxiety

(d) Shock

- Lowered blood pressure
- Cyanosis — blue skin
- Collapse
- Loss of bladder control
- Unconsciousness

(e) Most individuals who know they are allergic to insect stings wear a medic alert tag and carry a beesting kit with them. Basically, the kit contains the following:

- A premeasured injection of epinephrine (adrenalin), a drug that will relax the spasm that makes breathing difficult
- Tourniquet
- Antihistamine tablets
- Alcohol swabs

THIS PERSON NEEDS IMMEDIATE REFERRAL TO A DOCTOR OR A MEDICAL FACILITY

(f) The instructions usually suggest:

- Remove the stinger, if there is one.
- Apply a tourniquet between the sting and the heart, if it is on an arm or leg. (None should be applied for a neck sting.) It should permit circulation.
- Give the amount of injection suggested. Often, there are two doses if the first is not enough.
- Seek medical help and monitor the victim's breathing. Victim will probably need oxygen and more medication, so help should be sought.

(g) What is the treatment for such stings if the victim is not allergic? Stings from bees, spiders, and ticks cause localized swelling, redness, and pain. Here are some tips on what to do for them.

Bees, Wasps, Hornets

- Remove the stinger without squeezing the sac.
- Apply cold (ice if you have it) to relieve pain.
- Apply lotion such as calamine to relieve irritation.

Brown Recluse Spider (causes rash, chills, fever, joint pain, nausea, vomiting, and shock)

- Apply constricting band.

- Wash bite area with hydrogen peroxide or alcohol.
- Get medical help.

Ticks embedded in the skin

- Cover the tick with oil to close breathing holes. The tick should then back out and be removed. Do not just pull it off, as the head often stays under the skin and can cause infection.
- Wash the area very well.

Chiggers (cause itching, welts, swelling)

- Take a hot shower, lathering many times and rinsing, to remove larva.
- Apply antiseptic or alcohol to the welts to kill any additional larva.

5. Whether you are allergic or not, it is wise to protect yourself from insect stings. Try the following:
   (a) Avoid the use of floral scents in shampoo, shaving lotion, or cosmetics. They attract insects.
   (b) Wear dark rather than light colors.
   (c) Have adequate screening on your home.
   (d) Carry insecticide when hiking.
   (e) If you are near stinging insects, do not swat at them; back away slowly.
   (f) Wear protective clothing.

NOTE: In conjunction with all First Aid Units teachers are referred to the American National Red Cross First Aid Textbook.

# Section II

# Secondary Level Units

The secondary section of this handbook is not arranged in any priority order. Teachers are encouraged to use these units at such time and in such order as they deem most suitable.

The unit on Vocational Education Safety is not designed with student activities. Rather it stresses responsibility for safety at all levels in the vocational area.

## Rationale for Development of a Safety Team

It is strongly recommended that each school carefully establish and develop a Safety Team or Safety Council. This group should consist of school administrators, teachers, parents, students and members of the community dedicated and committed to implementing a comprehensive program of safety into the total school program.

This council or team should work with clearly stated safety objectives, altering these objectives as needed and periodically evaluating the program and results. The involvement of school personnel, students, parents, and community should create increased interest, greater dimension, and more effectiveness in a continuing safety program.

Objectives: 1. To utilize a Safety Team to strengthen the safety program.

2. To establish policies (in writing) to assure:

   (a) a safe school environment

   (b) responsible behavior

   (c) an effective program of safety education in the school.

Suggestions: All secondary schools are encouraged to participate in the National School Safety Honor Roll Program sponsored by the National Safety Council. This program involves planned yearly activities which involve students, faculty and community. Each year that a school qualifies for the program requires increased activity in safety in the school community.

For information write to:

School and College Department
National Safety Council
444 N. Michigan Avenue
Chicago, Illinois 60611

## IN-SCHOOL SAFETY PROJECTS

Concept: On the high school level, almost half of the accidents serious enough to require the attention of a doctor take place in the gym, or its environs, during some form of organized sport. About one-fifth of the serious accidents at this grade level occur while students are unsupervised, as in the hallways, on stairways, in restrooms, and on the school grounds.

SAFETY EDUCATION IN GRADES 9-12 SHOULD INCLUDE ACTIVITIES DESIGNED TO ACCOMPLISH THE FOLLOWING OBJECTIVES:

1. To develop an understanding of how seemingly harmless actions can and do cause serious, expensive and time-consuming accidents.
2. To increase the student's awareness of the numerous factors involved in making the school a safe place to be.
3. To develop within each individual an awareness that safety in a public place must be a cooperative effort to assure optimum results.
4. To develop within each individual, attitudes of responsibility for his own safety and that of others.
5. To alter student behavior patterns as a result of education, evidenced by a decrease in the school accident rate.

### PROJECT: SUGGESTED IN-SCHOOL SAFETY ACTIVITIES

Objective: To involve students in developing awareness of safety in school.

Activities:
1. Develop, print, and distribute brochures listing desirable traits of conduct for school bus riders.
2. Develop, print, and distribute a safety reminder card.
3. Give talks regarding safe behavior to groups of new students in connection with the school orientation program.
4. Develop a safety pledge. Before adopting it, analyze and discuss it in all homerooms.
5. Announce safety tips and weather news over school intercom.
6. Conduct personal interviews with students regarding attitudes toward safety.
7. Prepare safety scrapbooks.
8. Outline route for homecoming parade, using students to direct traffic as parade is under way.
9. Hold a Safety Quizdown to motivate interest and increase knowledge of safety rules.
10. Hold dances and parties with safety as the theme.
11. Organize bus emergency evacuation plan and drills.
12. Make book due slips for library use with each slip carrying a safety message.
13. Distribute safety bulletins to students each week.
14. Print and distribute safety posters, awards, bulletins, etc.
15. Assist in school planning for civil defense.
16. Prepare sign for use in blocking off stairways and exit routes during fire drills.
17. Develop and administer a safety knowledge test for new students.
18. Survey the entire school for safety hazards; report the hazards with suggestions on how they can be eliminated.

19. Encourage English teachers to let students create skits, stories or public service messages about safety subjects.
20. Patrol hallways for proper student flow and for walking hazards; publicize need for safe practices on stairways.
21. Supervise lines leading into cafeteria.
22. Hold tornado, fire, and civil defense drills. Outline procedures for such drills and distribute to students. Post signs in strategic areas with directions for drills.
23. Participate in Fire Prevention Week.
24. Inspect halls and exits periodically for accumulation of trash and other materials.

**PROJECT: SCHOOL SAFETY CAMPAIGN**

Objective: To increase the student's awareness of the many factors involved in making a school a safe place to be.

Activities:
1. Have students organize and carry out a safety campaign which would involve the entire student body. All students could report suspected hazards to a student committee which would ultimately report to the administration.
2. Items to report: broken windows, protruding nails, broken floor boards, broken chalk boards, loose handrails, unlighted stairways, faulty plumbing and electrical connections, etc.

   SHOPS — have teachers and students check machines for protective devices, check tools for defects, check to see that regulations for operating machines are posted.

   HOME ECONOMICS DEPARTMENT — have students and teachers check all kitchen appliances, sewing machines, dishes, cutlery, irons, ironing boards, can openers, etc., for possible hazards.

   PHYSICAL EDUCATION — Teachers and students should check all areas of gym, showers, dressing rooms, outside courts, play areas and the equipment used for the various activities.
3. Prepare checklist for each area of the school.
4. Assign student checkers in each area.
5. Plan a clean-up day for indoor and outdoor facilities and set a deadline for elimination of safety hazards.
6. When results are in, compile a report for the school principal and recommendations for correcting deficiencies.
7. FOLLOW-UP!!!

**PROJECT: SAFETY BULLETIN BOARDS**

Objective: To increase the awareness of the entire school population and visitors to the school — a variety of safety practices.

Activities:
1. Select a bulletin board displayed in a prominent place.
2. Have bulletin board changed often.
3. Material should be eye-catching, informative, and interesting.
4. Be sure the display has a message.
5. Posters, articles, drawings, newspaper clippings, accident pictures, sample literature, and many other items can be posted.
6. When possible, relate displays to season, school or local concerns.

**PROJECT: DRAMATIZATIONS**

Objective: To develop healthy attitudes toward safety.

Activities: Have student groups write/develop short dramatizations dealing with various safety situations.

(a) Use in the classroom to stimulate interest in a forthcoming unit of instruction.

(b) Provide variety in learning situations.

(c) Dramatize and evaluate subject matter which has been covered.

(d) Use in assembly programs to develop desirable safety attitudes in the entire student body.

(e) Use in other programs (PTA, Open House, etc.) to demonstrate to parents and the public, the attitudes and factual material taught in class.

**PROJECT: SCHOOL SAFETY SLIDE PROGRAM**

Objective: To develop an increased awareness of the need for practicing the rules of safety at school.

Activities:

1. Through class discussion, identify some hazardous situations observed around the school. (These may result from some structural deficiency or from the failure of individuals to observe the rules of safety.)
2. Make a list of hazardous situations which exist in the school.
3. Assign various students to take pictures of these hazardous areas. (If any degree of risk is involved, there should be teacher supervision.)
4. Develop script for each slide.
5. Compile into a program that can be used at "Open House", PTA meetings, school assembly or safety meetings, etc.

**PROJECT: CONDUCT A SCHOOL SAFETY SURVEY**

Objective: To develop within the students an increased awareness of school safety requirements and the need for them.

Activities:

1. Draw up a survey vehicle (check list)
2. Assign duties
3. Tabulate results
4. Report results in a written report to class, to administration and to the student body (bulletin board display).

Suggestion: Questions for Safety Survey

1. Movement of students in the building
   - Do the students keep to the right in the halls?
   - Are bannisters or tape used to separate traffic on the stairs?
   - Is running avoided in the building?
   - Are halls and stairs in good condition and well lighted?
   - Is stopping to talk with friends in the halls and on stairs avoided?
   - Are lockers kept closed when not in use?
   - Is stopping to talk in locker areas between classes discouraged?
   - Are lockers kept in good condition?

- Are plans provided for alternating groups going to lockers?
- Is courtesy practiced at lockers when both upper and lower lockers are in use?
- Is there a monthly campaign to clean lockers?
- To avoid crowding of the cafeteria, are students scheduled to go at intervals marked by designated bells?
- Are running to the cafeteria and pushing while waiting in line discouraged?
- Are rubber mats provided in the event of bad weather to prevent dangerous falls and slipping?

2. Fire Prevention
   - Are combustible materials properly stored away from the building?
   - Does the school have an effective warning system?
   - Does the school have an evacuation plan?
   - Do you know the procedures to follow in fire drills?
   - Is the school regularly checked for fire hazards?
   - Do students stay far enough away from buildings during drills?
   - Are the fire extinguishers checked and/or refilled at least once a year?
   - Does the school have predesignated routes for evacuation of students?
   - Is a sufficient number of fire extinguishers provided throughout the school?
3. Civil Defense Preparation, Drills and Evacuation
   - Is there an effective dual warning system?
   - Has an evacuation plan been set up to show the evacuation route?
   - Does the school have proper equipment, supplies, and shelter in case of disaster?
   - Does the school work with local Civil Defense authorities regarding procedures to use in case of disaster?
   - Are students familiar with the danger of fallout, how to recognize it, and how to protect themselves and others from it?
   - Are disposal facilities available for emergency use?
   - Do you time and record all evacuations?
   - Are students assigned specific duties to aid in evacuation procedures, such as closing windows and doors and directing students out of the building?
4. Laboratory Safety
   - Are students well informed about the proper procedures and rules for safe work in the laboratory?
   - Are students in the laboratories aware of warning signs on dangerous chemicals?
   - Are all combustible materials kept in fireproof containers?
   - Does the school have a sufficient number of fire extinguishers, first aid kits, etc., for the protection of the students?
   - Are laboratories properly ventilated and lighted?
   - Are materials properly used and returned to their designated places?
   - Are the laboratories ever used for unauthorized purposes?
   - Are laboratories locked when not in use?
   - Do students realize the danger of using materials improperly?

5. Physical Education Classes and Playground Equipment
   - Are all games properly supervised by a qualified director?
   - Are students considerate of others?
   - Is equipment used and stored properly?
   - Are dressing rooms, locker rooms, and showers properly lighted and equipped?
   - Are all participants familiar with equipment?
   - Are playgrounds kept free from hazardous objects?
   - Is first aid study made available in the physical education program?
   - Is a first aid kit readily available?
   - Are the gym walls behind the backstop padded?
   - Are there proper lighting facilities? Are windows, clocks, and lights properly guarded, and are floors properly maintained?
   - Are mats available for gymnastics and similar activities?
6. Shop Safety
   - Does each student know the proper use of each machine he or she plans to operate?
   - Are students always accompanied by a teacher while using the shop?
   - Are shops properly wired?
   - Are machines and wires checked at intervals to see if they are in proper working condition?
   - Are hazardous machines properly guarded?
   - Is proper equipment provided for personal protection of the operators?
   - Is receptacle voltage properly indicated?
   - Is adequate storage space provided?
   - Is the shop left in an orderly condition after each class?
   - Are protective devices for eyes available?
7. Safety in the Home Economics Department
   - Are oily cloths and cleaning products stored in the proper containers?
   - Are all students familiar with the proper usage of stoves and sewing machines?
   - Are all irons and other appliances in proper working condition?
   - Are sharp pointed objects in proper places?
   - Is there proper supervision at all times?
   - Is a first aid kit available?
   - Do students know the basic fundamentals of first aid?
   - Is there a fire extinguisher on hand at all times?

**UNIT 2**

**PROJECT: SAFETY IN THE HOME**

Concepts: 1. Home accidents account for over 29 thousand deaths per year and over 4 million injuries.

2. Proper safety precautions and safe home maintenance are essential for the prevention of injuries in the home.

Objectives: 1. To identify different home safety hazards.

2. To plan ways to correct structural and maintenance hazards in the home.

Activities: 1. Students will invite a building contractor or local real estate agent to discuss the precautions builders take to insure a structurally safe and hazard free home. Students will make a list of ideas presented. Each student will also ask a neighbor to explain four things they do in housekeeping and maintenance to insure their family's safety.

On the day these interviews are due in class, students will discuss each interview in groups of five. Students will compare the level of safety conciousness of their neighbors. The groups will also discuss the most important precautions people take to maintain a safe home environment.

2. Students will collect newspaper clippings describing home accidents. In groups of three, students examine each accident and brainstorm ways the accidents could have been prevented.

3. Grab Bag Activity: Teacher will list potentially hazardous items in the home (for example: oily rags, rugs, toys, staircases).

These will be placed on cards and dropped in a box. Students will draw out one card. Using library materials, pamphlets, or textbooks, students will research the dangers of the item listed on their card. After preparation, students will make a two minute informal talk on the danger of this item and proper safety precautions. After each talk the class may ask the speaker questions.

4. After studying safety precautions each student will be responsible for writing a safety hint. These may be in the form of a poem, proverb, short paragraph or sentence. At the beginning of each class three students will share a safety hint. This will continue until all students have had an opportunity to share their hint.

5. In class, students create posters illustrating an important safe maintenance idea for the home. Each poster will have a safety slogan and eye catching phrase. These will be displayed around the school to increase school's safety awareness.

6. Students list all accidents they can recall that have occurred in their home in the last six months. In groups of four, students will discuss the accident:

(a) Causes — structural or maintenance

(b) Preventive measures or remedies

(c) Each group will report their findings to the class.

7. Students will examine their home for safety hazards by using the following checklist. Checklist follows, pages 67-69.

## CHECKLIST: SAFETY IN THE HOME

YES NO

### FIRE PREVENTION

- Do you have any overloaded sockets?
- Are all wires in good condition?
- Are all electrical cords away from combustible materials?
- Has a qualified electrician made electrical repairs?
- Does anyone smoke in bed?
- Are matches and fuels out of children's reach?
- Are there plenty of noncombustible ash trays in every room?
- Do you make sure all cigarettes are thoroughly extinguished before leaving a room?
- Do the members of your family know the fire hazards in your home?
- Is the attic clear of all flammables?
- Are the closets and storage lockers clear of all flammables?
- Are flammable fluids such as gasoline, benzine, and naptha kept in tightly closed metal containers?
- Is the lawn kept free of debris and rubbish?

### HOME FIRE FIGHTING

- Are you aware of what to do in case of fire?
- Are you aware of the different types of fires and the methods to be used to extinguish each?
- Is there a fire extinguisher in your home?
- Do you have enough knowledge of first aid to take care of any injuries?
- Are there adequate fire escape routes?
- Does each member of your family have a duty to perform in case of fire?
- Is the fire department's telephone number available in case of an emergency?
- Would you be cool, calm, and collected in the event of fire?
- Would you remember to close the flaming section away from the rest of the house?

### BABY SITTING

- Do you know how to cope with unexpected situations?
- Are you alert, watchful, and responsible?
- Do you know safety rules that apply to baby sitters?
- Do you plan ahead in case of emergencies?
- Do you know first aid procedures?
- Do you know where to get assistance in case of an emergency?
- Do you keep the children out of the kitchen and other potentially dangerous areas?
- Do you look in on the children often while they are sleeping?
- Do you make sure all sharp objects are out of the children's reach?
- Are toys and small objects kept off the stairs?

YES NO BABY AND CHILD SAFETY IN THE HOME

- Do you know where all the exits are?
- Are a flashlight and batteries available in case of an emergency?
- Are ladders, step stools, etc., put away when not in use?
- Are poisons and medicines stored out of children's reach and locked up?
- Are children ever left alone with household cleaners or other poisonous products when they are out and in use?
- Are electrical cords out of children's reach and electrical sockets covered?
- Are paints used suitable for children's environment?
- Are children taught to store toys to avoid hazards?
- Do all rooms have night lights for children's safety?

SAFETY INSIDE THE HOME

- Are you and your family conscious of the many home hazards?
- Are all plastic bags destroyed after being used?
- Are pets inoculated for rabies?
- Do you keep old refrigerators and freezers locked or are the doors removed?
- Do you have emergency fire equipment on hand at all times?
- Is there a first aid kit in your home?
- Are all firearms and ammunition locked in a safe place?
- Do you make sure children have all preventive shots and vaccinations?
- Are screens and doors easily opened from the inside?
- Are there adequate circuits for electrical appliances and are they grounded?
- Is all garbage covered properly and disposed of regularly?
- Are matches kept in suitable containers and in safe places?
- Does the home have a sturdy step ladder?
- Are family members careful to see that the pilot light is burning when using gas appliances?
- Do you see that all sharp and dangerous objects are kept out of the reach of small children?
- Are all appliances kept working properly and are electrical cords in good condition?
- Are all perishable foods and canned goods stored properly and in safe places?
- Are all electrical appliances turned off before plugging them in or before removing the plug?
- Are all spilled foods and liquids wiped up immediately?

GENERAL SAFETY IN THE HOME

- Are all sharp objects handled with care?
- Is furniture properly assembled and in good condition?
- Are repairs made promptly?
- Are all closets orderly and cabinet doors kept shut?
- Are all shelves properly arranged and uncluttered?
- Are you careful in the handling of electric blankets in order not to damage the wiring?
- Do you have proper lighting in your home?

YES NO

- Are coat hangers picked up after use?
- Is smoking in bed prohibited in your home?
- Are floors highly polished?
- Are all floors kept clean and free of objects?
- Are throw rugs used on floors?
- Does any room have linoleum that has curled up on the edges?
- Do you refrain from putting oily mops and rags in closed places?
- Is your storage area free from rubbish?
- Are all poisonous or dangerous medicines stored properly and out of reach of small children?
- Are all poisonous household cleaners and medicines labeled properly?
- Is there a rubber mat and hand railing provided to prevent slipping in the bathtub or shower?
- Are old, unusable medicines properly disposed of?
- Do you refrain from wearing loose sleeves, jewelry, etc., while using the washing machine?
- Are small children kept away from all machines?
- Are rooms properly wired for the electrical applicances within?
- Is your home properly ventilated?
- Is your hot water heater checked frequently for defects?
- Are all utensil handles sturdy and turned inward toward the center of the stove when in use?
- Are stairwells properly illuminated?
- Are stairs free of loose objects? Do they have safe handrails?
- Do you know how to operate emergency levers on household machines?
- Are open fires shielded with screens?
- Are you sure all cigarettes are out before disposing of them?
- Are sufficient ash trays supplied for smokers?

Follow-up: Students and teacher will discuss student's findings and the possible dangers present in homes.

UNIT 3

## RECREATIONAL SAFETY PROJECTS

Concept: On the high school level many students are victims of accidents which occur in the recreational area. Most of these are the result of carelessness or improper use of recreational equipment or materials.

SAFETY EDUCATION IN GRADES 9-12 SHOULD INCLUDE ACTIVITIES DESIGNED TO ACCOMPLISH THE FOLLOWING OBJECTIVES:

1. To develop an understanding of how seemingly harmless actions can and do cause serious, expensive and time-consuming accidents.
2. To increase the student's awareness of the numerous factors involved in making recreational activities safer.
3. To develop within each individual an awareness that safety in recreation must be a cooperative effort to assure optimum results.
4. To develop within each individual, attitudes of responsibility for his own safety and that of others.

### PROJECT: CAMPING AND HIKING

Camping Objectives: 1. To provide an ideal learning climate for safe camping.

2. To have fun and enjoy camping in a safe environment.

Activities:

1. Campfire Control:

   Make preparation for campfires by observing and reading all the hints for safety in building the campfire. Cut dead trees to start your campfire. Choose the site for your fire.

2. Foods and Outdoor Cooking:

   Plan a menu and pack for the trip. Study and read the techniques of cooking in the out-of-doors.

3. Knifemanship and Toolcraft:

   The knife, gun and axe are equally important tools of a camper. Select the tools you will take on the trip. Handmade fuzz sticks are handy gadgets for use around the campsite, also decoration articles such as totem poles, lapel pins, a noggin (rustic drinking cup), a whistle.

Hiking Objectives: 1. To develop safe hiking habits while having fun.

2. To acquaint students with the proper attire for hiking safely in all weather conditions.
3. To make students aware that proper physical conditioning is essential for optimum safety in hiking.

Activities:

1. Rain Hike:

   Waterproof yourself thoroughly and go out to see how animals and plants conduct themselves in the rain.

2. Historical Hike:

   Hike to some historical place about which you have previously briefed yourself by reading or consulting local people.

3. Star Hike:

   Hike to a hill on a clear evening to study the stars and their legends. Take a blanket roll for an overnight sleep-out.

4. Have students develop a checklist for safe hiking practice including clothing, gear and terrain.

**PROJECT: FIREARM SAFETY**

Concept: Because of the increasing popularity of BB guns, shot guns, pistols, and rifles in recreational activities, there is a need to develop early safety habits.

Objectives:
1. To have the uninitiated recognize the inherent dangers of firearms.
2. To provide the necessary knowledge for habitual safe use of firearms.

Activities:
1. Have students list as many hazardous or unsafe conditions as they think might occur during any phase of the activity.
2. Have students develop a checklist for safe use of firearms (1) in class, (2) in the field. (sample follows)
3. Give students extra credit for pointing out unsafe or hazardous conditions during the activity.
4. Have an expert come talk to the class on hunter and firearm safety.
5. Have the class collect and discuss articles concerning firearm related accidents.

**CHECKLIST FOR FIREARM SAFETY**

1. Assume every gun is a loaded gun. Each time a gun is picked up, an immediate check should be made to see that it is not loaded. A gun is made to hurt something or someone.
2. All persons need instruction to use a firearm safely.
3. A qualified person should be called upon to give instruction.
4. Know the local ordinance in regard to shooting a gun in the city limits.
5. Firearms and ammunition should be stored separately.
   a. Allows time for a person to gain self-control.
   b. Keeps small children from getting hurt.
   c. Guns and ammunition should be locked up.
6. Firearms should be unloaded before taking them into the home, placing them in a car, placing in a boat, crossing a fence, or handing to another person.
7. Only the ammunition designed should be used in the firearms.
8. Always hunt with a "buddy," a dependable person in case help is needed.

9. Follow instructions of how to carry a gun safely.
10. Do not point or aim a gun at anything you do not want to shoot.
11. Pupils must always have parental permission to use firearms. Parents should know:
    a. When children are to use firearms.
    b. Where they will be used.
    c. Under what conditions they are used.
    d. Who the companions are.
12. Understand the shooting distance for each type of firearm.
13. Know the danger of shooting at hard surfaces or large bodies of water.
14. When hauling a gun in an automobile, place it on the floor between the seats on the driver's side with the barrel pointing away from you. Make sure the gun is not loaded.
15. Wear a yellow cap and red jacket or red cap and yellow jacket when hunting.
16. Be sure of the target before pulling the trigger.
    a. Always be able to identify an object before pulling the trigger.
    b. Never shoot at a sound (rustling of leaves or breaking of twigs).
17. Know and understand the position of gun and direction to shoot when two persons are hunting.
    a. Hunter on left cradle the gun to the left or place stock under armpit with barrel on forearm.
    b. Hunter on right cradle gun to the right or place stock under armpit with barrel on forearm.
    c. Hunter on the left shoots all game going to left, hunter on right shoots all game going to right. Neither hunter shoots game coming toward them.
18. Know and understand the position of gun and direction for each to shoot when three persons are hunting. (Neither hunter shoots at the game running toward him.)
19. Know how to cross a fence safely with a gun.
20. Know how two hunters cross a fence with a gun.
21. Have permission to hunt on other people's property.
22. Be sure to tell property owner when leaving his property.
23. Observe the game laws.
24. Be sure to close all gates to property when hunting.
25. The proper procedure for placing an unloaded gun in a boat is to hand to companion with barrel point up.
27. A competent gunsmith should make repairs and alterations on guns.
28. The safety is the most important device on a shotgun or rifle; it should not be removed until one is ready to fire.
29. Know what to do when lost.
    a. Fire three shots in rapid succession (S.O.S. for hunters).
    b. Stay in one place.
    c. Build a fire in a safe place and be sure it's out before leaving.
30. Keep the finger out of the trigger guard until you are ready to fire.
31. Form local gun clubs and follow rules and regulations.

**PROJECT: SPORTS AND SAFETY**

Concept: There is no determinant of the number of injuries or discomforts sustained in or caused by sports because these are not all reported.

Objectives:
1. To have students recognize unsafe or hazardous conditions or situations and take appropriate action.
2. To have students realize that proper skills and conditioning lessen the chance of injury or discomforts.
3. To have students habitually utilize proper skills and conditioning.

Activities:
1. Have students list as many unsafe or hazardous conditions or situations as they think might occur during certain activities.
2. Have students poll the student body (or sections thereof) for accidents or injuries sustained in recreational sports. Incidents can be their own or others of which they know.
3. Form committees to clean up recreational areas.
4. Have students list their ideas of what could happen if participants in certain activities were not proficient in skills or were not properly conditioned.
5. Have students design a warm-up activity for their favorite activity.
6. Have students design a conditioning program for their favorite activity.
7. Have students develop a check list for safety in recreational sports.

**PROJECT: SKATEBOARDS AND ROLLERSKATES**

Concept: Activities and their spin-offs have inherent dangers and hazards to be avoided.

Objectives:
1. To have students recognize unsafe or hazardous situations or conditions and take appropriate action.
2. To have students habitually perform proper skills and conditioning to lessen the chance of accidents, injuries, or discomforts.

Activities:
1. Have students list as many unsafe or hazardous conditions or situations as they think might occur during any phase of the activity.
2. Have students poll the student body (or sections of) for accidents or injuries sustained in the activity.
3. Discuss the right types of equipment to be used.
4. Discuss safety equipment to be included as part of standard equipment.
5. Have students debate the value of and design of warm-up program for skateboarding and/or rollerskating.
6. Have students debate the value and design a conditioning program for skateboarding and/or rollerskating.
7. Have students develop a safety checklist for any/each activity.
8. Form committees to visit local skating rinks or skateboard courses to evaluate each according to the check list.

**PROJECT: SKATEBOARD SAFETY**

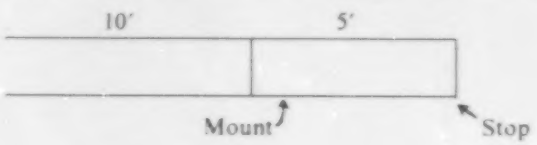
Objective: To demonstrate the safe operation of skateboarding and to provide information for care of skateboards.

Activities:

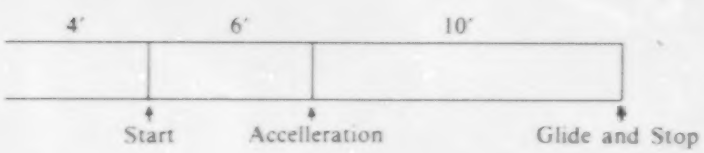
1. With your teacher, determine where and when you will conduct the demonstration and what age level will be involved as participants.
2. If conducting the demonstration during school, contact the school principals of the age levels involved, and get their support. Also, seek the assistance of the physical education department at your school. Parental permission forms are suggested as well.
3. Duplicate the Skateboard Fact Sheet, page 75, and distribute to participants.
4. Provide skateboards or notify students prior to the event to bring their own.
5. On the day of the program, chalk out a proposed course (See Item 10) indicating exercises each participant should perform.
6. Provide a controlled and monitored practice area.
7. Divide course participants into group abilities. All must go through the basic course.
8. Keep a first aid kit available, and arrange to have someone qualified in first aid at the event.
9. Assign committee members to each task for supervision and assistance.
10. Proposed skateboard course follows:

**PROPOSED COURSE:** Beginning-intermediate

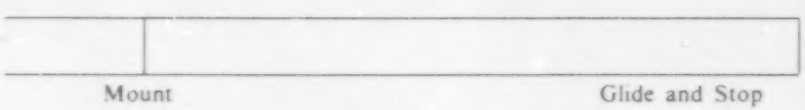
- Mounting and Stopping: check for control on mounting and stopping




- Level Area:




- Slopes: downhill stability



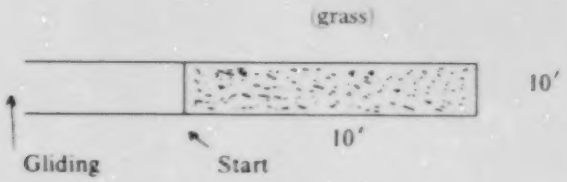

- Turning Left and Right: slight slope for stability in turning by cones

Start

X - Cone

Stop

5. Falling: practice falling onto hands or side, only on grassy area




Advanced Obstacle Course (may be timed)

Course must contain:

- sharp and medium curves
- level area
- down and up slopes
- gravel—natural or placed
- water (puddles), dirt, grass
- rut or simulated dirt

Note: Course layout is optional; set one up according to available facilities.

## SKATEBOARD FACT SHEET

- Know how to ride your skateboard.
- Know the terrain and surface you are riding on, and continually check for obstructions.
- Ride one person per skateboard.
- Ride on private property only; keep off the street.
- Ride facing forward.
- Learn tricks after you have learned the basics.
- Try to break a fall with your hands, not with your back or your head.
- Buy a skateboard that fits your size.
- Carry your skateboard when you cross a street.
- Check for sharp edges and points on the pavement that could cut or catch you.
- Buy a skateboard that "wobbles" enough to help you turn, but not too much to cause instability.
- Keep your skateboard parts tightened.
- Replace broken parts with parts made for your skateboard.
- Remember, having fun means being safe!

**UNIT 4**

**PROJECT: NATURAL DISASTERS**

Concept: Natural disasters create emergencies.

Objectives: To acquaint students with various natural disasters, the damages that result, the dangers involved, and the procedures to be followed for protection.

Activities: 1. Earthquakes — Have the students to:

(a) Research and discuss the nature of earthquakes.

(b) Find an article in a periodical of a recent earthquake and the resulting damage to lives and economy.

(c) Report to the class the details of the Charleston earthquake.

(d) Relate the Woodstock Fault in South Carolina's Low Country to the Charleston earthquake.

(e) Practice "Duck and Cover" drills.

(f) Practice evacuation procedures as established by the District Superintendent.

(g) Make a collage of earthquake damage by using pictures.

(h) Simulate earthquake sounds and record on tape.

(i) Construct a model of a fault that results in earthquakes.

(j) Make a list of do's and don'ts for earthquakes:

(a) Do move away from buildings and utility wires if the shaking catches you outside.

(b) Don't use matches, candles or other open flames during or after the quake.

(c) Do check for injuries. Do not move seriously injured unless they are in danger.

(d) Don't run through or near buildings. The greatest danger is just outside doorways.

(e) Don't go sightseeing.

(f) Do stop if in a moving car, but stay in the car.

(g) Do check for damage in sewerage, water pipes, electrical wiring, and gas lines.

2. Floods — Have the students:

(a) Use maps to identify geographic areas of S. C. subject to flooding/flash flooding.

(b) Check S. C. Land Resources Department or local Soil and Water Conservation District for flood prone areas in your county.

(c) Identify earthen dams that could cause flooding.

(d) Identify potentially dangerous bridges in your county that could wash out during a flood.

(e) Establish an evacuation plan for your school and home in case of flooding.

(f) Interview the principal and school district superintendent to learn the plans and policies that have been established in the event of a natural disaster.

(g) Obtain information on the dangers of fires from gas stoves and broken gas lines, electrical shorts, backed up sewage, bacteriological contamination.

(h) Recognize the added hazard of cuts, bruises, and hypothermia.

3. Hurricanes — Normal school activities have usually ceased when there is danger of a hurricane, because of the warning system developed by the U. S. Weather Bureau — Have the students:

(a) Use Civil Defense materials to acquaint themselves with procedures in emergency situations. Example — Store loose outdoor furniture, board up windows, brace outside doors, etc.

(b) Research material through newspapers for hurricanes that have brought damage in S. C. — Examples — Hazel and Diane.

(c) Make a home emergency equipment list, then check your home for these items. Example — flashlight, spare batteries, battery powered radio, food that doesn't need heat or refrigeration, and several large containers of drinking water.

(d) Debate: Are there *her*ricanes or *him*acanes? Let the students come up with a new naming system.

4. Tornados — Have the students:

(a) Distinguish between tornado watch and tornado warning. Establish procedures for these two situations.

(b) List protective measures for your home.

(c) Plan and conduct a tornado drill (with principal's permission).

(d) Observe film on tornados and discuss.

5. Winter Storms — Have the students:

(a) Construct a list of winter storm safety rules (see attached page for example)

(b) Define and Explain:

| | |
|---|---|
| chill index | snow |
| hypothermia | heavy snow |
| blizzard | hazardous driving warning |
| ice storm | freezing rain |
| | freezing drizzle |

(c) Write a brief essay or short story on: "Your automobile can be your best friend or your worst enemy during a winter storm."

(d) Draw a picture of a "well" dressed person in a storm, or a "poorly" dressed person.

(e) Draw pictures of winter storms.

(f) Devise a plan for emergency sheltering and feeding of stranded people during a winter storm.

(g) Describe ways to be prepared for isolation at home during a winter storm, or write a story on the topic.

(h) List travel rules for bad winter weather.

6. General — Have the students:

(a) Discuss and make plans for taking care of handicapped students during a natural disaster.

(b) Make a tape of sounds that represent the different natural disasters.

(c) Guess which sounds represent which disasters.

(d) Show the different atmospheric conditions that cause tornados, hurricanes, winter storms, and flooding using a meteorological map.

(e) Discuss dangers and precautions around fallen wires.

# Winter Storm Safety Rules

*Keep ahead of the winter storm* by listening to the latest weather warnings and bulletins on radio and television.

- *Check battery powered equipment* before the storm arrives. A portable radio or television set may be your only contact with the world outside the winter storm. Also check emergency cooking facilities and flashlights.
- *Check your supply of heating fuel.* Fuel carriers may not be able to move if a winter storm buries your area in snow.
- *Check your food* and stock an extra supply. Your supplies should include food that requires no cooking or refrigeration in case of power failure.
- *Prevent fire hazards* due to overheated coal or oil burning stoves, fireplaces, heaters, or furnaces.
- *Stay indoors during storms* and cold snaps unless in peak physical condition. If you must go out, avoid overexertion.
- *Don't kill yourself shoveling snow.* It is extremely hard work for anyone in less than prime physical condition, and can bring on a heart attack, a major cause of death during and after winter storms.
- Rural residents: Make necessary trips for supplies before the storm develops or not at all; arrange for emergency heat supply in case of power failure; be sure camp stoves and lanterns are filled.

*Dress to fit the season.* If you spend much time outdoors, wear loose-fitting, lightweight, warm clothing in several layers; layers can be removed to prevent perspiring and subsequent chill. Outer garments should be tightly woven, water repellent, and hooded. The hood should protect much of your face and cover your mouth to ensure warm breathing and protect your lungs from the extremely cold air. Remember that entrapped, insulating air, warmed by body heat, is the best protection against cold. Layers of protective clothing are more effective and efficient than single layers of thick clothing; and mittens, snug at the wrists, are better protection than fingered gloves.

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Weather Service

*Your automobile can be your best friend—or worst enemy—during winter storms,* depending on your preparations. Get your car winterized before the storm season begins. Everything on the checklist shown below should be taken care of *before* winter storms strike your area.

| | |
|---|---|
| ___ignition system | ___heater |
| ___battery | ___brakes perfectly adjusted |
| ___lights | |
| ___tire tread | ___wiper blades |
| ___cooling system | ___defroster |
| ___fuel system | ___snow tires installed |
| ___lubrication | ___chains |
| ___exhaust system tight | ___antifreeze |
| | ___winter-grade oil |

Keep water out of your fuel by maintaining a FULL tank of gasoline.

*Be equipped for the worst.* Carry a winter storm car kit, especially if cross country travel is anticipated or if you live in the northern states.

Suggested Winter Storm Car Kit: blankets or sleeping bags, matches and candles, empty 3-pound coffee can with plastic cover, facial tissue, paper towels, extra clothing, high-calorie, nonperishable food, compass and road maps, knife, first aid kit, shovel, sack of sand, flashlight or signal light, windshield scraper, booster cables, two tow chains, fire extinguisher, catalytic heater, axe.

*Winter travel by automobile is serious business.* Take your travel seriously.

- If the storm exceeds or even tests your limitations, seek available refuge immediately.
- Plan your travel and select primary and alternate routes.
- Check latest weather information on your radio.
- Try not to travel alone; two or three persons are preferable.
- Travel in convoy with another vehicle, if possible.
- Always fill gasoline tank before entering open country, even for a short distance.
- Drive carefully, defensively.

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## COLD WAVE

Cold waves are another common form of winter storm. A cold wave warning indicates an expected rapid fall in temperature within a 24 hour period which will require substantially increased protection to agricultural, industrial, commercial, and social activities. The temperature falls and minimum temperatures required to justify cold wave warnings vary with the changing of the season and with the geographic location. Regardless of the month or the section of the country, a cold wave warning is a red flag alert to the public that during a forthcoming forecast period a change to very cold weather will require greater than normal protective measures.

## WIND CHILL (EQUIVALENT TEMPERATURES)

How cold will you feel?

The temperature of the air is not always a reliable indicator of how cold a person will feel outdoors. Other weather elements, such as wind speed, relative humidity and sunshine (solar radiation), also exert an influence. In addition, the type of clothing worn, together with the state of health and the metabolism of an individual also will have an influence upon how cold he will feel. Generally, "coldness" is related to the loss of heat from exposed flesh; it can be assumed to be proportional to the measured rate of heat loss from an object.

Wind Chill Equivalent Temperature Table below gives equivalent temperatures for various combinations of wind and temperature. As an example, a combination of 20°F. and a 10 mph wind has the same cooling power as a temperature of 3°F. and a wind speed of 4 mph.

The next time you want to know how cold it is outdoors, go ahead and check that thermometer! But keep in mind that other things (wind speed, state of nourishment, individual metabolism and protective clothing) all help to determine how "chilly" you feel at a given time and place.

WIND CHILL

Equivalent Temperatures (°F)

| WIND VELOCITY (MPH) | 45 | 40 | 35 | 30 | 25 | 20 | 15 | 10 | 5 | 0 | −5 | −10 | −15 | −20 | −25 | −30 | −35 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 45 | 40 | 35 | 30 | 25 | 20 | 15 | 10 | 5 | 0 | −5 | −10 | −15 | −20 | −25 | −30 | −35 |
| 5 | 43 | 37 | 32 | 27 | 22 | 16 | 11 | 6 | 0 | −5 | −10 | −15 | −21 | −26 | −31 | −38 | −42 |
| 10 | 34 | 28 | 22 | 16 | 10 | 3 | −3 | −9 | −15 | −22 | −27 | −34 | −40 | −48 | −52 | −58 | −64 |
| 15 | 29 | 23 | 16 | 9 | 2 | −5 | −11 | −18 | −25 | −31 | −38 | −45 | −51 | −58 | −65 | −72 | −78 |
| 20 | 26 | 19 | 12 | 4 | −3 | −10 | −17 | −24 | −31 | −39 | −46 | −53 | −60 | −67 | −74 | −81 | −88 |
| 25 | 23 | 16 | 8 | 1 | −7 | −15 | −22 | −29 | −36 | −44 | −51 | −59 | −66 | −74 | −81 | −88 | −96 |
| 30 | 21 | 13 | 6 | −2 | −10 | −18 | −25 | −33 | −41 | −49 | −55 | −64 | −71 | −78 | −86 | −93 | −101 |
| 35 | 20 | 12 | 4 | −4 | −12 | −20 | −27 | −35 | −43 | −52 | −58 | −67 | −74 | −82 | −89 | −91 | −105 |
| 40 | 19 | 11 | 3 | −5 | −13 | −21 | −28 | −37 | −45 | −53 | −60 | −69 | −76 | −84 | −92 | −100 | −107 |
| 45 | 18 | 10 | 2 | −6 | −14 | −22 | −30 | −38 | −48 | −54 | −62 | −70 | −78 | −86 | −93 | −102 | −109 |

WIND VELOCITY (MPH)

**UNIT 5**

**PROJECT: SCIENCE LABORATORY SAFETY**

Concept: Students learn good science safety procedures from teachers and situations.

Objectives: To provide opportunities in the science lab for students to:

(a) learn safety practices

(b) identify hazardous chemicals

(c) store and dispose of chemicals

(d) use safety equipment

(e) learn first aid measures.

Activities at the Beginning of School:

1. have students check storeroom and identify hazardous chemicals.
2. have students create designs and label hazardous chemicals as: flammable, explosive, poisonous fumes, harmful to skin, corrosive, etc.
3. discuss proper storage and disposal of hazardous chemicals (see NIOSH publication).
4. have students develop a list of lab safety rules. (See sample rules attached.)
5. review safety lists on the following pages.

## LABORATORY SAFETY PROCEDURES

Established safety procedures are essential to any effective safety program. Recommended procedures must be understood and practiced by teachers and students if accidents are to be minimized. The procedures listed in this section cover major areas in science teaching; however, these procedures are not "absolutes" and should be interpreted with reason.

Guidelines

These guidelines can be used as an effective checklist for evaluating the science safety program.

General

- Always perform an experiment or demonstration prior to allowing students to replicate the activity. Look for possible hazards. Alert students to potential dangers. Safety instructions should be given each time an experiment is begun.
- Horseplay or practical jokes of any kind are not to be tolerated.
- Never eat or drink in the laboratory or from laboratory equipment.
- Students should perform no unauthorized experiments.
- Exercise great care in noting odors or fumes. Use a waffing motion of the hand.
- Never use mouth suction in filling pipettes with chemical reagents. (Use a suction bulb.)
- Never "force" glass tubing into rubber stoppers.
- Use heat-safety items such as safety tongs, asbestos mittens, aprons, rubber gloves.
- Constant surveillance and supervision of student activities are essential.
- Student attitude toward safety is *imperative*. Students should not fear doing experiments, using reagents, or equipment, but should respect them for potential hazards.
- Teachers should set good safety examples when conducting demonstrations and experiments.
- Experiments should never be assumed to be free of safety hazards just because they are printed.

Laboratory Safety

- Good housekeeping is essential to maintaining safe laboratory conditions.
- Confine long hair and loose clothing. Laboratory aprons should be worn.
- Never conduct experiments in the laboratory alone.
- Use safety shields or screens whenever there is potential danger that an explosion or implosion of apparatus might occur.
- Proper eye protection devices should be worn by all persons engaged in, supervising, or observing science activities involving potential hazards to the eye.
- Make certain all hot plates and open burners are turned off when leaving the laboratory.
- Frequent inspection of the laboratory should be conducted.
- Fire blanket(s) and fully operable fire extinguisher(s) should be located in each laboratory.
- Chemistry laboratories should contain an emergency shower, eyewash fountain, and safety goggles for all students and teacher(s).
- Every laboratory should have two unobstructed exits.
- There should be an annual, verified safety check of each laboratory.
- One teacher should not have to supervise more than 24 students engaged in laboratory activities at any one time.
- All work surfaces in the chemical or biological laboratory should be thoroughly cleaned after each use.
- Chemistry laboratories should be equipped with functional fume hoods. Fume hoods should be available for any activity(ies) including flammable or toxic substances.
- Master cutoff valves or switches are advisable for laboratories with gas, water, and electricity.
- Students enrolled in laboratory sciences programs should be encouraged to join the school insurance plan if available.

First-Aid and Emergency Tips

- Have first-aid procedures established in the event of an accident.
- All students and teachers should know the location of fire extinguishers, eyewash fountains, safety showers, fire blankets, and first-aid kits.
- Safety signs should identify the location of safety equipment.
- Student aides should be fully aware of potential hazards and know how to deal with accidents.
- Emergency instructions concerning fire, explosions, chemical reactions, spillage, and first-aid procedures should be conspicuously posted near all storage areas.
- Safety posters are encouraged in science laboratories.

Biological

- Never use a scalpel or cutting device with more than one cutting edge.
- Specimens should be properly supported when being dissected. Never dissect a hand-held specimen.
- Only nonpathogenic bacteria should be used in the classroom. Indiscriminate culturing and handling of pathogenic or nonpathogenic organisms are discouraged.
- Petri dish cultures should be sealed with tape.
- Bacterial cultures should be killed before washing petri dishes. Most cultures can be killed by heating for 20 minutes at 15 pounds/inch$^2$ (138 kPa) of pressure.
- Contaminated culture media should be sterilized with a strong disinfectant and washed with a strong cleaning agent.

- Always flame wire loops prior to and after transferring microorganisms.
- Wear proper equipment (apron and rubber gloves) when washing bacteriological or chemical ware.
- Use utmost caution when using a pressure cooker. Turn off the heat source, remove the cooker, and allow the pressure to gradually reduce to normal atmospheric pressure prior to removing the cover.
- Never transfer liquid media or other solutions with a mouth pipette.
- Use proper illumination for microscopes. Reflected sunlight can damage the eye.
- Under no condition should potassium cyanide be used as the killing agent in insect-killing jars. If alcohol, chloroform, or ether is used as the killing agent, students should be warned of their flammability and toxicity.
- Utmost precautions should be used to ensure that only sterile, disposable lancets are used if blood samples are taken. Proper supervision is essential. Mechanical lancets should not be used for blood typing.

Physical

- Proper protective devices should be used when hammering, chipping, or grinding rocks, minerals, or metals.
- Direct viewing of the sun should be avoided at all times.
- Direct viewing of infrared and ultraviolet light sources should be avoided at all times.
- Never allow the open end of a heated test tube to be pointed toward anyone.
- When alcohol is heated, it must be in a water bath container with the top of the beaker, etc., holding the alcohol below the top of the water bath container.
- Volatile liquids such as ether, gasoline, alcohol, carbon sulfide, and benzene should be used in very small quantities away from open flames and in a well-ventilated room. Such substances should be heated electrically or in water baths.
- Broken or chipped glassware should not be used.
- Breathing gases, especially in high concentrations, can be very dangerous. Carbon dioxide is no exception, as unconsciousness can result within seconds if high concentrations are breathed. Breathing pure nitrogen, argon, helium, or hydrogen is dangerous.
- Chemicals should not be tasted for identification purposes.
- When heating materials in glassware by means of a gas flame, the glassware should be protected from direct contact with the flame through use of a wire gauze or asbestos-centered wire gauze.
- Don't pour water into acid. *(Do what you "oughta"* (ought to), *put the acid in the water!)*
- Broken glass in sinks should be promptly removed as it presents a serious hazard.
- Use a fume hood whenever dealing with highly volatile, toxic fumes.
- When working with flammable liquids:

  Have a $CO_2$ or multipurpose fire extinguisher available.

  Work in a well-ventilated area.

  Keep the liquid over a pan or sink.

  Use no flames or high-temperature heating devices.

  Do not store in a home-type refrigerator. Fumes may be ignited by sparks produced in the electrical switching system. (Explosion-proof refrigerators are available from science supply houses.)

Electrical

- Students should understand the human body is a conductor of electricity.

- Batteries or cells of 1.5 volts or less are safe for elementary classroom use. However, the battery may explode if heated or thrown into an open fire. The chemicals inside the battery can be dangerous if taken internally or exposed to the skin.
- The use of high voltage AC such as a 110-volt line can be extremely dangerous.
- Students should be taught safety precautions regarding the use of electricity in everyday situations.
- Students should be cautioned not to "experiment" with electric current on home or school circuits.
- Work areas, including floors and counters, should be dry.
- Never handle electrical equipment with wet hands or when standing in damp areas.
- Never overload circuits.
- To prevent severe shocks, discharge electrical condensers and Leyden jars before handling.
- Water and gas pipes are grounded. Never touch a ground, such as water and gas pipes, and an electrical circuit simultaneously.
- Do not use electrical wires with worn insulation.
- Use 3-prong service outlets.
- Electrical equipment should be properly grounded. A ground-fault circuit breaker is desirable for all laboratory AC circuits. A master switch to cut off electricity to all stations is desirable for all laboratory AC circuits.

Safety Equipment

All laboratories and science teaching areas should have, and *use*, safety equipment appropriate for the type of science activity being conducted. Protective equipment is designed to prevent or minimize injury. It does not prevent accidents from occurring.

The following is a list of needed safety items in the science laboratory:

- fire extinguishers*
- first-aid kits
- fire blankets
- sand buckets
- eyewash facilities
- emergency shower facilities
- safety goggles
- laboratory aprons
- gloves (asbestos, etc.)
- tongs
- respirators
- wire gauze and/or asbestos-centered wire gauze

*The multipurpose ABC-type dry chemical fire extinguisher covers all fire classes except for reactive and combustible metals such as sodium, lithium, potassium, magnesium, and certain metallic hydrides and alkyds. Below are fire classes defined:

- **Class "A"** — Fires in wood, textiles, and other ordinary combustibles containing carbonaceous material. This type of fire is extinguished by cooling with water or a solution containing water (loaded stream) which wets down material and prevents glowing embers from rekindling. A general purpose dry chemical extinguisher is also effective by fusing and insulating.

- **Class "B"** — Fires in gasoline, oil, grease, paint, or other liquids that gasify when heated. This type of fire is extinguished by smothering, thus shutting off the air supply. Carbon dioxide, dry chemical, and foam are effective on this type of fire.
- **Class "C"** — Fires in live electrical equipment. This type of fire is extinguished by using a nonconducting agent. A carbon dioxide extinguisher smothers the flame without damaging the equipment. A dry chemical extinguisher is also effective. Whenever possible, the source of power to the burning equipment should be cut off.
- **Class "D"** — This new and somewhat specialized classification includes fires in combustible metals such as magnesium, titanium, zirconium, sodium, potassium, and others. A special extinguishing powder, unlike regular dry chemical and general purpose dry chemical, may be applied by scoop. Dry sand may be used to extinguish small class "D" fires. Apply by scoop.

Storage Facilities

Proper storage policies are essential to the safe operation of any laboratory. Below are some precautions which should be taken into consideration:

- Laboratory chemicals and equipment should not be stored in the same room.
- Storage rooms containing flammable, toxic, or combustible substances should be properly ventilated.
- The chemical storage area should be secured at all times when not in use, with access only to authorized personnel.
- Flammable and dangerous chemicals should be locked in a fire-resistant cabinet.
- Flammable or toxic gases should be stored at or above ground level and not in basements.
- All gas cylinders should be secured against falling over and should be stored away from heat sources.
- All chemicals should be adequately labeled and stored alphabetically according to types.
- A fire extinguisher should be immediately accessible. (The multi-purpose-type covers class A, B, and C fires.)
- Mixing or transferring chemicals should not be permitted in the storage area.
- Storage areas should not have blind alleys.
- Open flame, smoking, or any other type of heat should not be permitted in the chemical storage area(s).
- Cleanliness and order should be maintained in the storage area at all times.
- Chemical storage areas should be well-ventilated and lighted.

Safety with Glassware

A high percentage of laboratory cuts and burns are due to handling glassware. Students should be properly instructed on the use and care of glassware prior to laboratory work. The precautions listed below should be followed when working with glassware in the laboratory:

- Glassware which is to be heated should be Pyrex or a similar heat-treated type.
- Broken glassware should be disposed of in a special container marked "BROKEN GLASS."
- Fingers should never be used to pick up broken glass. A whisk broom and dustpan can be used for large pieces, and large pieces of wet cotton can be used for very small pieces.
- Glassware should be thoroughly cleaned after use.
- Students should never eat or drink from laboratory glassware.
- Glass objects which present breakage hazards should be wrapped with plastic wire, wire screening, tape, or other special devices. Example: taped Dewar flask, safety rings on graduated cylinders.
- Heated glassware looks cool several seconds after heating, but can still burn for several minutes.

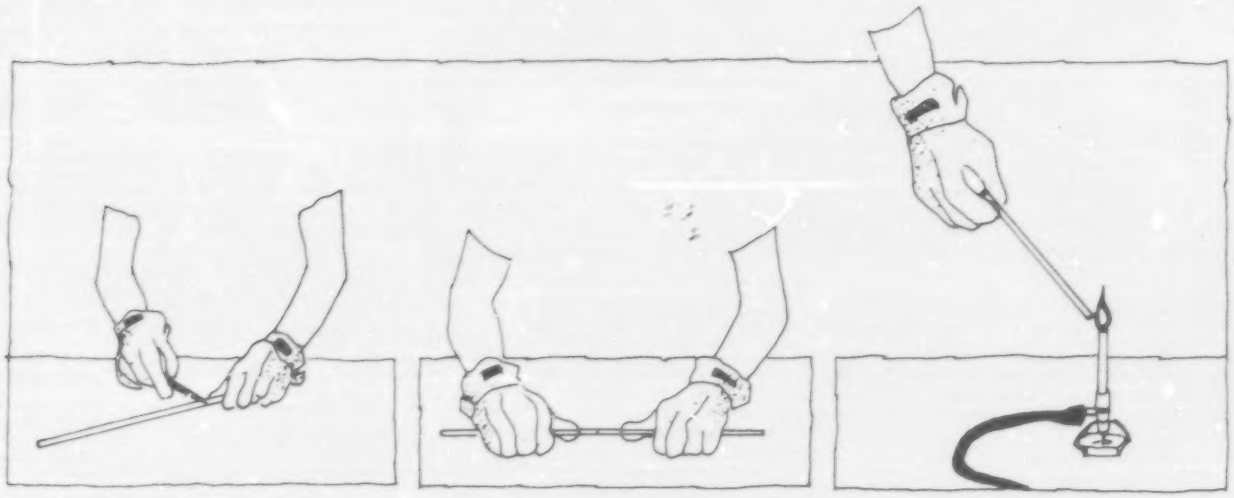
## Glass Tubing Safety

Glass tubing is a versatile item in the science classroom. However, if not handled carefully, it can produce severe cuts. The following procedures are described to reduce the dangers and help increase the versatility of this common laboratory item.

### Cutting

Glass tubing is usually purchased in long segments. The following steps are provided to assist in cutting pieces to required lengths:

1. Lay the tubing on a flat surface and hold it firmly in place with hand at the approximate position where the break is to be made.
2. At the position where the cut is desired, produce a deep scratch by drawing the edge of a triangular file firmly across the tube.
3. If gloves are not available, use a cloth to cover the tube in the area in which the break is to be made.
4. Grasp the covered tube with both hands so that the scratch is on the outer side, the fingers circling the tube, with the thumbs meeting on the opposite side behind the scratch.
5. Snap the tube sharply by pushing outward with the thumbs and simultaneously pulling back with the fingers. The tube will break on the scratch mark.



### Fire Polishing

The ends of a glass tube may have very sharp edges. These edges can be smoothed by fire polishing. Below are steps to follow when fire polishing a glass tube:

1. Hold the glass tube so the sharp end is in the top of the flame of a gas burner.
2. Rotate the tube so all sides are heated evenly, causing the sharp edges to melt and become smooth.
3. Place the fire-polished tube on an asbestos mat or some other insulation material while it cools.

### Bending

Bending glass tubing is often necessary in order to carry out science experiments. The following procedures are recommended for producing needed configurations:

1. Place a wing top attachment on a gas burner and ignite the burner.
2. Heat the area of the glass tube to be bent while holding it with one hand on each end.
3. While heating the tube, rotate it constantly in your fingers to ensure even heating on all sides.

4. When the glass becomes soft and pliable, remove it from the flame and quickly bend the tube to the desired shape. Results usually improve with practice.
5. Place the hot glass on an asbestos mat or some other insulation material while it cools.

### Inserting Glass Tubing/Rods

Inserting glass tubing or rods into cork or rubber stoppers can be very dangerous. The following steps should be followed to prevent injuries:

1. All glass tubing used with cork or rubber stoppers should be fire polished or have the edges beveled with emery paper.
2. A soap solution or glycerine should be used on the ends of glass rods or tubing for lubrication before inserting them into a stopper. The rod or tubing should be wrapped with several layers of cloth. They should be held as close as possible to the stopper. Always aim the rod or tubing *away* from the palm of the hand which holds the stopper.
3. Cork stoppers should be removed from tubing to keep them from adhering and "freezing." "Frozen" stoppers can be removed by splitting them with a razor blade and then reclosing them with rubber glue.

### Chemical Disposal

The safe disposal of extremely dangerous, unwanted, unlabeled, or contaminated chemicals is a major concern in science teaching. No longer is the "solution to pollution," dilution. Natural efforts, through new laws, public awareness campaigns, and research findings, make us cognizant of the importance of protecting our environment from chemical pollution.

Disposal procedures are numerous and some are complex. However, the recommended procedures listed in the *Laboratory Waste Disposal Manual*, published by the Manufacturing Chemists Association, 1825 Connecticut Avenue, N.W., Washington, DC 20009, should cover most chemicals found in the science laboratory. The publication contains 29 disposal procedures, each describing proper handling equipment, procedures for safe disposal of spills or package lots, and examples of each procedure. In addition, an alphabetical reference chart provides an index to the recommended disposal procedures as well as numerous physical properties of over 1,100 elements and compounds. The above publication, priced $2.50 in 1977, is highly recommended for school systems with disposal problems.

### Landfill

The following is a partial listing of elements and compounds that, according to the Manufacturing Chemists Association's publication, can be dumped into landfills or released into the air:

Argon
Asphalt
Batteries, dry cell
Boron
Bromochloromethane
Bromotrifluoromethane
Calcium carbonate
Calcium oxide
Carbon black
Carbon tetrafluoride
Chlorobromomethane
Chromium
Crude lime
Dichloromethane
Dichloromonofluoromethane
Epoxy resin systems
Ferrosilicon
Helium
Hexachloroethane
Hexafluoroethane
Hydrogen
Lamp bulbs
Latex
Magnesium oxide
Metal scrap
Molybdenum, insoluble compounds
Neon
Nitrogen
Nitrogen fertilizers
Nitrogen trioxide
Oxygen
Ozone
Paint
Pyrethrum
Resins
Rubber
Scrap glass
Scrap stoneware
Silica
Sludges
Stone, alberine
Sulfur
Sulfur hexafluoride
Tar
Tin, organic compounds
Titanium oxide
Tremolite
Trifluoromethane
Urea
Zinc oxide

## Drain

Small amounts of dilute acids, bases, or salt solutions may be flushed down the drain with large amounts of water. All material should be soluble in water. Volatile, corrosive, toxic, or insoluble materials should never be flushed down the drain. Chemical waste should not be permitted to accumulate. Items should be properly disposed of immediately after they are no longer needed or wanted.

## Acquisition and Reprocessing

Some chemical companies will accept and reprocess certain chemicals on a limited basis. If assistance is needed in ascertaining the names of such companies, contact the Division of Science Education, State Department of Public Instruction.

This has been reproduced from "Safety First in Science Teaching", Division of Science Education, North Carolina State Department of Education, Raleigh, NC 27611.

UNIT 6

## DRIVER EDUCATION AND TRAFFIC SAFETY PROJECTS

The focus of Driver Education and Traffic Safety should be on preparing the individual to take his place in the community as a responsible citizen and highway user. The increase in motor vehicle accidents and fatalities in today's traffic world make it essential to make wise judgements and develop decision-making skills concerning personal driving behavior.

A mature concept of highway responsibility can be developed by educating youth to recognize, appreciate and understand

1. the major cause of traffic accidents.
2. the role of enforcement.
3. the relationship of alcohol and other drugs in motor vehicle accidents.
4. the necessity to adopt defensive measures to safeguard one's self, family, and community against motor vehicle accidents and fatalities.
5. the economic and social costs involved in motor vehicle accidents and fatalities.

Rationale: With today's intricate highway system and millions of motor vehicles on these highways, it is imperative that young drivers have a sound background of traffic safety and "Rules Of The Road."

Concepts:
1. Motor vehicle accidents contribute to more than 50,000 deaths annually.
2. Approximately 50% of all motor vehicle fatalities involve a drinking driver.
3. Driving attitudes and behavior of the individual will strongly influence tomorrow's accident and death statistics.
4. Individual acceptance of responsibility is essential to the reduction of motor vehicle accidents and fatalities.
5. The reduction of motor vehicle accidents is the result of the interaction of mental, emotional and physical health, the appropriate skills to operate a motor vehicle, and social consciousness.

Objectives:
1. To know that a motor vehicle when "Misused" can cause personal and family problems . . . oftentimes a lifetime of tragedy and disability.
2. To identify the role of law enforcement in today's highway system.
3. To understand the widespread use of alcohol and drugs affecting motor vehicle accidents and fatalities.
4. To recognize that defensive driving should be practiced throughout life; to develop attitudes and practices that will protect and preserve physical, mental, and social health.
5. To understand that people drive carelessly and irresponsibly for many reasons.
6. To appreciate what part today's young citizens can play in safer highways for tomorrow.

### PROJECT: DRIVER SKILLS CONTEST

Objective: To provide a written and a behind-the-wheel driving test to evaluate students' driving ability, knowledge, and skill.

Procedure:

- Meet with your teacher and principal to select a time, date and location of a driver skills contest.
- Notify appropriate persons about the contest: city police, staff of other schools in your area, local and school newspaper and radio personnel.

- Decide whether to award prizes. They can be donated or a registration fee can be charged or cash donations can be obtained to pay for them.
- In determining rules for the contest, consider these:
  - Use either driver education cars or participants' cars.
  - Each participant's car must pass a safety check.
  - Only licensed drivers or students with permits may participate.
  - Limit the number of participants (for example, high school students only).
  - Schedule a written test.
  - Set a time limit for the contest.
  - Establish scoring techniques.
- Assign persons to be responsible for the following areas:
  - Written test
  - Behind-the-wheel driving contest
  - Teachers for in-car scoring
  - Score keepers and recorders
  - Crowd control
  - Registration
  - Trophies and donations
  - Publicity, including follow-up, and thank-you letters
  - Concessions

SCORING For Maneuvers:

| | |
|---|---|
| Start with | 500 points |
| Minus Deductions | xxx |
| Sub-Total | xxx |
| Add Exam Score | xxx |
| TOTAL SCORE | XXX |

# BEHIND-THE-WHEEL DRIVING TEST: MANEUVERS AND SCORING

EACH PARTICIPANT MUST DRIVE AN APPROVED VEHICLE AND BE ACCOMPANIED BY AN INSTRUCTOR (TO BE PROVIDED) WHO MUST NOT OFFER ANY ASSISTANCE OR SUGGESTIONS.

- Begin at the starting line. Drive between two cones.
- Drive the left front and left rear tires between two cones set 12 inches apart (5 point deduction for each tire that strikes a cone).
- Head into the parking stall between cones; place front bumper as close to the curb as possible (1 point deducted for each inch away from the curb) without crossing the curb with bumper (25 points deducted if bumper crosses the curb).
- Back into the next parking stall, moving the right rear tire between two blocks (5 point deduction for each tire that strikes a block); place rear bumper as close to the curb as possible (1 point deduction for each inch away, 25 point deduction if bumper crosses the curb).
- Head in, make right turn, and stop for measurement (same as in #3 and #4); back out left and stop for measurement; head out, turn right, and stop for measurement; back out to the left, completing the maneuver.
- EVASIVE MANEUVER: Back into parking stall, upon signal from police officer, accelerate rapidly without spinning tires and establish 17-22 mph (checked by radar) to qualify maneuver. As the vehicle crosses a marked line, the driver will be given a hand signal indicating which way to turn around the center cone; he or she will drive between two cones and make a controlled stop (no sliding tires) for measurement. NOTE: DISQUALIFICATION DURING THIS PARTICULAR MANEUVER MAY OCCUR UNDER THESE CONDITIONS:
  - not reaching a minimum speed of 17 mph
  - exceeding 22 mph
  - spinning or sliding tires
  - turning in the wrong direction (not following command)
- Head into parking stall for measurement (same as above).
- Back into parking stall for measurement (same as above).
- Parallel park (in one smooth, continuous movement). Measurement will be made to curb at both front and rear tire (1 point deduction for each inch over 12; 10 point deduction for striking curb.)
- SERPENTINE MANEUVER: Weave forward between cones and stop. Weave backward between cones and stop (10 points deducted for each cone struck).

## PROJECT: IMPORTANCE OF DRIVING AT 55 MPH

Objective: To emphasize the importance of observing the 55 mph speed limit.

Procedure: For an assembly program, invite five or six members of the community to participate in a panel discussion, include a mechanic, a highway trooper or police officer, and other knowledgeable persons. Or set up a debate, with the help of your school's speech teacher or an English teacher, to discuss the pros and cons of the 55 mph speed limit.

Emphasize the theme of conservation, as it applies to fuel as well as human lives.

Key points to bring out in the discussion/debate:

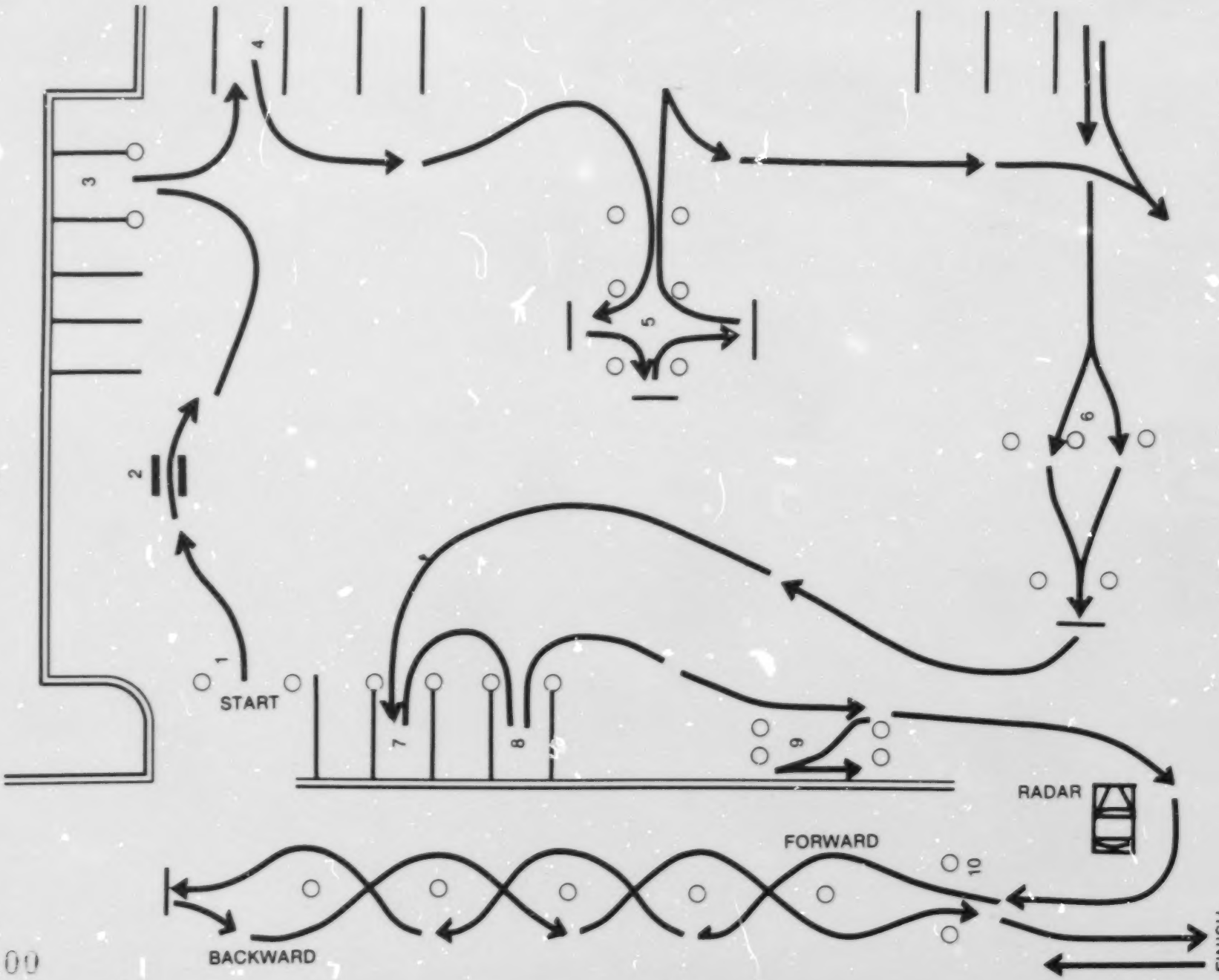
- 1973 Oil Embargo
  - Emergency Highway Energy Conservation Act was passed in 1974.
    - All states were in compliance with the 55 mph speed limit.
    - All states kept 55 mph speed limit after oil embargo ended April 29, 1974.
  - United States has only six percent of the world's population, but consumes 35 percent of the world's energy.
- Relationship Between Speed and Safety
  - During the first year (1974) of reduced speeds, 9,000 lives were saved.
    - Greatest reduction in fatalities and injuries were in rural areas which experienced greatest reduction in speeds.
    - In urban areas where speeds were already lower than 55 mph, there was some reduction in fatalities and little reduction in frequency of injuries.
  - By raising the speed limit to 60 mph, an estimated increase of 3,500 traffic fatalities a year would occur.
- Relationship Between Speed and Energy Conservation
  - Speed wastes energy.
  - If everyone obeyed the 55 mph speed limit, four percent of the total motor vehicle fuel consumption, or 200,000 barrels of gasoline, would be saved each day.

**PROJECT: SAFETY ON THE HIGHWAY**

Objective: To enlighten the public on proper safety practices and personal courtesy on interstate highways.

Procedure:

- Contact school officials for approval and support of project.
- Make posters, mimeographed hand-outs, and printed fact sheets urging the following:
  - Observe the minimum speed limit as well as the maximum.
  - Use the right lane for slow-moving traffic.
  - Be sure your car is in good condition with:
    - full tank of gas
    - extra quart of lubricating oil
    - tools for minor repairs
    - tires in safe condition
    - radiator and fan belt in good condition
    - steering mechanism in safe operating condition
    - lights and brakes in safe condition
    - all other items such as windshields and seat belts in good condition
  - Be alert at the wheel. Remember to
    - move your eyes
    - stop car every hour
    - keep fresh air coming in car
  - Keep the driver physically fit by:
    - having alternate driver on long trips if possible
    - not driving while fatigued
  - Practice courtesy on the highway at all times.


START
1
2
3
4
5
6
7
8
9
10
RADAR
FORWARD
BACKWARD
FINISH

## WRITTEN TEST

Decide whether the statement is more true than false, or vice-versa. Each of the 25 statements is worth 4 points.

T F 1. Pedestrians have the right of way at all times.

T F 2. It is prohibited by law to park within 20 feet of a crosswalk at an intersection.

T F 3. When you sign for your license, you give permission to take a breathalyzer test.

T F 4. Always use low beam headlights when driving in fog.

T F 5. On the freeway, you can change lanes without signaling.

T F 6. Every driver involved in an accident is legally required to remain at the scene of the accident, render aid, and give pertinent information to others involved and to law enforcement officers.

T F 7. Yield signs are yellow triangles.

T F 8. On a two-way, two-lane roadway, you may pass within 100 feet of the intersection.

T F 9. You may pass when there is a yellow line on your side of the roadway, parallel to the yellow center line.

T F 10. You may pass at a railroad crossing if there is no train coming.

T F 11. When backing, you should scan the area every six seconds.

T F 12. Allow at least 20 feet between cars for every 10 mph speed.

T F 13. If you breathalyzer shows .01, you are legally under the influence of alcohol.

T F 14. When skidding, you should steer into the skid.

T F 15. If a car is coming head-on at you, you should brake hard, head for a ditch or other open ground, lean on the horn, and flash your lights.

T F 16. When parking downhill where there is a curb, turn your wheels away from the curb.

T F 17. When you come to a sign reading "Speed Zone Ahead," you should be prepared to speed up.

T F 18. When backing, you must yield the right-of-way to all other vehicles.

T F 19. You should dim your headlights when an oncoming car comes within 500 feet.

T F 20. Drivers approaching a yield sign must reduce speed or stop to yield right-of-way for any traffic on the roadway to be crossed or entered.

T F 21. Stop signs are six-sided and require a complete stop.

T F 22. Warning signs are diamond-shaped and indicate conditions which require caution.

T F 23. To be legally parked a vehicle must be no more than 24 inches from the curb.

T F 24. If the licensee changes his or her address or changes his or her name through marriage or any other legal process, he or she must notify the Department of Public Transportation within 15 days.

T F 25. When making a U-turn, you should stop your car as far to the right as possible, check for traffic coming from both directions, signal, then start your turn.

## ANSWER KEY FOR WRITTEN TEST

1-F
2-T
3-T
4-T
5-F
6-T
7-F
8-F
9-F
10-F
11-F
12-T
13-F
14-T
15-T
16-F
17-F
18-T
19-T
20-T
21-F
22-T
23-F
24-F
25-T

**PROJECT: PEDESTRIAN SAFETY ASSEMBLY PROGRAM**

Objective: To make the community a safer place for pedestrians, particularly at night.

Procedure:

- With your teacher, ask the principal for permission to conduct an assembly for the school.
- Arrange for an appropriate film.
- Ask a police officer to make a few remarks at the assembly.
- At your assembly, demonstrate with a flashlight how safety retro-reflective materials can improve visibility. For the demonstration, have a person hold a flashlight next to his or her face at eye level and slowly skim it across a distance (10-12') at a sample of retro-reflective material. A brightness will be visible that is not there when the flashlight is held out at arm's length. Explain that this is similar to the effect that would be seen by a driver in an approaching automobile.
- As another part of the assembly, explain the I.P.D.E. procedure:

  I — Identify: At the curb, stop and identify all obstacles or possible hazards, such as oncoming cars.

  P — Predict: Try to predict what the hazard (oncoming car) is going to do — keep coming, stop, etc.

  D — Decide: Based on your prediction, decide what you are going to do (walk across the street or wait at the curb).

  E — Execute: Carry out your decision without delay (walk safely and quickly to the other side of the street).
- A poster contest could be sponsored in conjunction with the assembly.

## SAMPLE PRESENTATION FOR HIGH SCHOOL ASSEMBLY

- INTRODUCTION. Did you know that nearly 11,000 pedestrians in our nation were killed last year? More than half of these pedestrians were struck by vehicles after dark because motorists have trouble seeing walkers at night.

  Pedestrians are not required by law to wear or carry lights. However, we are starting a campaign to light up pedestrians here in _____(city)_____ so they will be more visible to motorists at night.

  What can you do to help? The answer is to use the procedures of I.P.D.E. (more about this in a minute), light up yourself at night, obey basic pedestrian safety rules, and educate your family and friends to do the same.

  We all know the basic rules of being a pedestrian — they have been drilled into each of us by our parents and teachers since we were small. But let me explain about I.P.D.E.

  (Explain the I.P.D.E. procedure)

  The I.P.D.E. procedure should be applied in all situations that involve you as a pedestrian.

  Now, how is the best way to light up yourself at night? A substance called retro-reflective material is seen every day on street signs and license plates, and it is now available to you. A person wearing the old stand-by white at night is visible up to 180 feet away. However, it takes an automobile traveling 60 mph 260 feet to stop. With retro-reflective material, the pedestrian is visible beyond 500 feet. Retro-reflective means, basically, that the light is returned to its source.

- RETRO-REFLECTIVE MATERIAL DEMONSTRATION. Demonstrate the retro-reflective material with a flashlight. As the arm with the flashlight moves away from the face, it will be obvious that there is a difference in visibility.

- FILM/TALK/SKIT. Introduce a film, a talk by a police officer, or an original skit on pedestrian safety.

- WRAP-UP. Thank members of the audience for their attention and remind them to:
  - use the I.P.D.E. procedure
  - light themselves up at night
  - obey basic pedestrian safety rules
  - help educate others about pedestrian safety

**PROJECT: PEDESTRIAN SAFETY ACTIVITIES**

Objective: To promote an effective pedestrian safety program.

Procedure:

- Set up a panel discussion or short lecture on pedestrian safety problems at PTA meetings and civic clubs.
- Form school safety patrols.
- Make surveys of the community to help determine the intensity of pedestrian safety problems.
- Organize a code of pedestrian safety ethics.
- Inform the public by:
  - distributing pamphlets and fact sheets
  - sponsoring films
  - giving demonstrations
  - giving public speeches
  - putting up posters
- Cooperate with local police and fire departments.
- Encourage penalties for pedestrian violations.
- Place "Watch for Pedestrian" signs on campus.
- Avoid jaywalking.
- Promote police protection for children crossing streets.
- Ask local authorities to assign more police officers to public gatherings and other activities.
- Show movies and present lectures which deal with the hazards that students face going to and from school.
- Make use of newspapers, TV, and radio to inform the public of dangers of pedestrian violations.
- Ask local authorities to construct pedestrian crosswalks at busy intersections and on four-lane highways where there are no places for pedestrians to cross.
- Check for Walk lights at intersections, and ask police to see that the lights are enforced.
- Survey to determine if walking lanes and traffic directions exist at shopping centers to assure safe travel for pedestrians.
- Ask authorities to construct playgrounds in convenient areas so that children will not have to cross busy streets.
  - Playgrounds should be fenced.
  - Pedestrian crosswalks should be clearly marked with control lights and be supervised by patrol persons during playground hours.
  - Car pools should be encouraged to deliver children to playgrounds to cut down on traffic.

## CHECKLIST ON PEDESTRIAN SAFETY

YES NO

- Are city streets adequately lighted and in good condition?
- Are pedestrian safety devices in proper working condition?
- Are the crosswalks marked in your city?
- Does your community have any blind intersections?
- Does your city have pedestrian lights?
- Are speed limits enforced?
- Do you keep to the right in all halls and walkways?
- Does your city enforce jaywalking regulations?
- Do you obey all lights at intersections?
- Does your city have an adequate number of officials to carry out all pedestrian laws?

## PROJECT: INFANT AND CHILD SAFETY RESTRAINTS

Objective: To bring about greater awareness by parents of the need for infants and young children to be restrained while riding in automobiles.

Procedure:

- Determine with your teacher's help if any other service organization is already providing information on infant and child safety restraints. Rather than duplicating efforts, if someone else is doing this project, you can contact the other organization and offer your assistance.
- Secure permission from school administrators. Point out the importance of the project and the need in the community.
- Set completion dates for each step in the project, and divide the responsibilities listed below:
  - Obtain materials.
  - Recruit individuals and groups to dispense the materials (two- or three-person teams).
  - Plan publicity.
- Estimate the number of persons to whom you will dispense information. See Resources and write to an agency which can supply the needed materials. Usually these materials can be provided free, or in large numbers at a very small printing cost.
- Once the materials are obtained, the two- or three-person teams can begin distributing them. Research indicates parents are more receptive to infant safety suggestions just before or shortly after a baby is born. For this reason, your efforts can be most productive when directed toward pediatricians, hospital personnel, and teachers of prenatal classes.

  Ask these persons to help distribute the information and inquire how many copies they will need. Deliver the copies and arrange them attractively. Leave your name and phone number so you can be called for more copies. Keep a record of the persons you talk to and make followup calls.
- Carry out an active publicity campaign to promote use of infant and child safety restraints.
- See sample fact sheet information, next page.

# FACT SHEET CONCERNING CHILD SAFETY RESTRAINTS

- What happens to infants and children when not buckled in?
  - They can be injured by hitting the dashboard, roof, or another passenger, even in low-speed accidents and sudden stops.
  - They may fall out of the car door.
  - They can sometimes cause an accident by distracting the driver.
- How to protect an infant:
  - A baby can easily be thrown from the arms of a seat-belted adult.
  - Safe infant car carriers are rear-facing, attached with adult lap belts, and fit about 20 pounds maximum.
  - Babies should ride in car carriers from birth, even coming home from the hospital. The infant's back will not be harmed by the semi-reclining position. Make a newborn more comfortable with rolled blankets to pad the carrier sides.
  - Car beds and household infant seats are not designed to protect the infant if involved in a crash.
- How to protect a toddler:
  - Children under 50 pounds are best protected by car seats or harnesses designed and tested for crashes; be sure to use them correctly.
  - Lap belts which have been fastened properly are appropriate when no crashworthy child restraint is available.
  - The back seat is safer than the front seat, unless the driver must supervise the child closely. The center of the car is preferred.
  - Old car seats which only hook over or under the passenger seat do not protect a child. Any car seat without a label showing compliance with FMVSS 213 should be thrown out, not given away.
- What about children over age four or over 40-50 pounds in weight:
  - The adult lap belt, correctly fastened, gives good protection. Buckle it snugly over upper thighs, and under heavy coats, not across the stomach. For proper fit, it may be necessary to put the child on a two- to three-inch cushion.
  - A shoulder belt should be used also, as long as it does not cross the child's face.
  - All car pool passengers need to buckle up.

Reprinted from Action for Child Transportation Safety, 400 Central Park West, #15, New York, N.Y. 10025

**PROJECT: SAFETY SURVIVAL KIT**

Objective: To inform the public what to carry in cars for safety survival, whether driving on a trip or around town.

Procedure:

- Prepare fliers on suggested Safety Survival Kit. (A local printing company may donate the paper and printing.) Identify your high school and your organization on the flier.
- Review and follow suggested copy for a flier; you may use this form or design your own.
- Put together a display board to attract attention. It can contain all or part of the items on the flier.
- Determine the time, place, and date you plan to distribute the fliers.
- Get permission for distribution of the fliers from your principal, manager of the shopping center, etc.
- Publicize when and where you are going to distribute the fliers.
- Set up a distribution center in an approved area; have a friendly smile and hello for the public.
- Clean up the area following completion of the project.

**(SUGGESTED COPY FOR FLIER ON SAFETY SURVIVAL)**

THINGS TO DO BEFORE STARTING ON A TRIP:

**At the House:**

- Notify police and ask for surveillance.
- Turn off water heater.
- Stop paper and arrange for mail pickup.
- Leave key with neighbor.
- Plan trip.
- Notify friend of route of travel and estimated time of return.

**To the Car:**

- Check tires, steering, muffler.
- Get engine tuned up.
- Check lights and wipers.
- Make check list for loading the car.
- Obtain maps of area to be traveled.
- Check insurance coverage, title, auto registration, driver's license.
- Check all fluid levels.

STANDARD SAFETY SURVIVAL KIT ITEMS:

- Blanket and adequate first aid kit
- Fire extinguisher — 2¾ lb. dry charge or 5 lb. $CO_2$
- Wheel blocks
- Spare tire, jack that works, lug wrench
- Tow chain or cable
- Jumper cables
- Flares or reflectors (3)
- Small cartons of sand (for flares, traction, or stove)
- Seat belts and shoulder harness for each passenger
- Compass, notebook, pencil
- 1 quart of oil (metal can)
- 1 pair of gloves (rubberized, orange or yellow for visibility)
- 1 plastic poncho (orange or yellow)
- Fan belt, spare fuses in assorted sizes
- Roll of copper wire
- Roll of plastic tape (red or yellow)
- Adjustable wrench, straight screwdriver, Phillips screwdriver, adjustable pliers, knife
- Change for phone calls
- Small can opener, litter bag, survival food (if in an isolated area)
- Owner's manual
- Ice scraper
- EMPTY gas can
- Flashlight with spare bulb and batteries (store batteries separately)
- Rags, waterproof matches, whisk broom
- Sunglasses for daytime driving

**PROJECT: SEAT BELT CHECK**

Objective: To promote the use of seat belts.

Procedure:

- Schedule dates and times to make seat belt checks. However, do not publicize the specific dates and times; do tell those who need to know (e.g., highway patrol).
- Contact the state highway patrol to get permission and ask for assistance.
- Arrange for prizes such as hamburger coupons to award to those who are wearing seat belts. Record the names of people or businesses that donate prizes and what the prize is.
- Organize students and advisor, and select a check point area. You will probably need three students per 50 cars. (example: exit of school parking lot).
- When checking:
  - For future use, record names of persons wearing seat belts.
  - Give awards to persons wearing seat belts.
  - Make a chart and tally the number of persons who did or did not wear seat belts.

| DID | DID NOT |
|---|---|
| | |

- The seat belt checks may be held periodically — once a week, once a month, every two weeks, etc.
- The purpose of having unannounced checks is to suggest to people that if they wear their seat belts, they may win a prize. Hopefully, this will lead to the establishment of the habit of putting on a seat belt, which in turn will reduce the number of fatalities and serious injuries caused by not wearing seat belts. (It is a proven fact that the use of seat belts reduces serious injuries and fatalities.)
- Hold as many checks as you think necessary to help people establish the habit of wearing seat belts.
- Once you decide to discontinue the seat belt checks, write a news release, being sure to include:
  - the names of persons who won prizes
  - the dates checks were held
  - a computation from your chart of the percentage of persons who wore seat belts. Graph this information on charts. Compute the increase or decrease made from the first check to the last check.
  - a conclusion developed from the available information
  - names of your sponsors
- For follow-up:

  After a specified period of time, hold another check to see if the percentage of people wearing seat belts is still the same as in the check. (If so, you have done an effective job.)

**PROJECT: TIRE DEPTH CHECK**

Objective: To check the tire tread depth and general condition of cars, and to inform drivers of the results.

Procedure:

NOTE: This check should only be done on cars with the drivers present and with their permission.

- Set a date and place for the project.
- For each three people checking tires, you will need two tire tread gauges. These gauges may be borrowed or bought from most tire stores or from large auto parts supply stores.
- Two students should do the checking, one car at a time. One student checks the front tires, and one checks the back, while the third student talks to the driver as the check is going on. The student talking to the driver should explain what school they represent, what organization is putting on the check, and why they are doing the check.
- The two checkers can also do a quick check for broken headlights and/or taillights and windshields.
- After the two tire checkers have completed their checks, they fill out the form below and go over it with the driver; they thank the driver for his or her cooperation.

---

**THANK YOU FOR LETTING US CHECK YOUR TIRE TREAD DEPTH**

Your tires show a depth of _____ inch; the minimum legal depth is 2/32 inch.

Your tires are: Legal _____ Illegal _____

Also, we found _____

_____

_____

_____

The _____(school)_____ student safety committee sponsored this tire tread depth check to help you drive safely.

**PROJECT: NIGHT SAFETY**

Objective: To inform drivers of and prepare them for the special hazards caused by darkness and other poor visibility conditions.

Procedure:

- Sponsor night driving training sessions in cooperation with your high school driver education or adult driver improvement courses.
- Survey your community for streets, roads, and intersections needing better lighting, especially those where accidents have happened at night. Submit a list of these locations to city/county officials with a courteous request for investigation and action.
- Sponsor a drive or program recommending the use of reflective materials on bumper stickers, pedestrian garments, bicycles, etc. You may work with another communuty organization on this project. Write the Injury Control Program, U. S. Department of Health, Education, and Welfare for the folder, "Let's Shed Some Light."

**PROJECT: OWNERSHIP/OPERATION AUTOMOBILE WORKSHOP**

Objective: To inform young drivers of different aspects of driver responsibility.

Procedure:

- In cooperation with your high school driver education class, hold a workshop or seminar for students about to get their driver's licenses or about to own their first cars.
- Invite the driver education teacher and other appropriate speakers to talk about the different aspects of driver responsibility:
  - traffic laws
  - penalties for violations
  - details of auto registration
  - licensing
  - insurance
- Hold a workshop or a series of workshops on auto safety maintenance and proper use of the car's safety features.
- Local auto dealers will usually cooperate with this kind of project. Many will open their service departments and provide mechanics or staff members to talk and demonstrate.

## CHECKLIST: DEFENSIVE DRIVING

YES NO

- Is your car regularly inspected for safety?
- Are you driving according to environmental conditions?
- Do you constantly update your knowledge of state traffic laws?
- Do you always keep alert while driving?
- Do you exercise courtesy when a car is passing?
- Do you allow at least one car length for each 10 mph when following other motor vehicles on the highway?
- Are you familiar with road talk (communicating with other drivers) and other courtesy measures?
- Do you keep your eyes moving while driving and take precautions against glare both night and day?
- Do you always look over the appropriate shoulder before changing lanes?
- Do you always remove sunglasses after sunset?
- Do you dim your lights when meeting or following a car?
- Do you have emergency flashing lights, back-up lights, and other safety features on your car?
- Do you observe all traffic rules and regulations?
- Are you always alert?
- Are you easily adjusted to changing conditions?
- Do you yield the right-of-way?
- Do you use the safety features in your car?
- Do you watch out for the other cars?
- Do you have the respect of other drivers?
- Do you use your lights properly?
- Are you confident of your driving ability?
- Do you tail gate?
- Do you show off in your car?
- Do you give proper signals?
- Do you know how to apply brakes on slippery roads?
- Do you share the road with others?
- Do you allow clearance when passing?
- Do you respect motorcycles?
- Do you respect the rights of pedestrians?
- Are you aware of the hazards of driving at night?
- Are you aware of the hazards of driving during bad weather?
- Do you make sure your car is in good condition?
- Have you had a driver education course with a qualified instructor?
- Do you leave yourself a way out of tight spots in traffic?

**PROJECT: MOTORCYCLE ROAD-E-O**

Objective: To test and improve riding skills of motorcyclists.

Procedure:

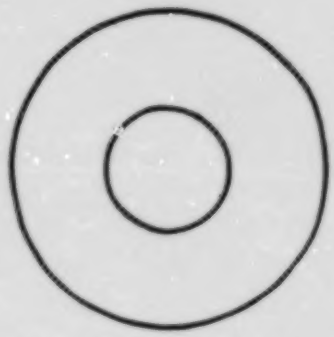
- Meet with your advisor and your driver education teacher concerning the following:
  - how many contestants to allow to enter the Motorcycle Road-E-O
  - date and time
  - location
  - how to publicize to appeal to possible participants
- Check with staff in the school district's business office about liability coverage for a Road-E-O. Be prepared to explain what will be included in the event.
- Arrange for the facilities (a parking lot).
- Make posters and announcements publicizing the Road-E-O.
- Assign tasks to safety committee members:
  - setting up and picking up cones
  - scoring
  - tallying
- Explain the Motorcycle Road-E-O to local merchants and ask them to donate awards/prizes for first, second, and third places.
- Prepare the score sheet.
- Register the contestants; a small registration fee may guarantee attendance.
- Before the event, chalk out or paint the exercises on the driving range. Use cones or other markers, also.
- Use the Check List on Motorcycle Safety.

## CHECKLIST ON MOTORCYCLE SAFETY

| Yes | No | |
|---|---|---|
| | | • Are all motorcycles required to have an annual safety check? |
| | | • Are cyclists informed of laws regarding navigation? |
| | | • Are laws regarding motorcycles enforced? |
| | | • Are instructors available to teach correct motorcycling techniques? |
| | | • Is the age limit governing motorcycle renting enforced? |
| | | • Are owners of motorcycle rental companies liable for their cycles involved in accidents? |
| | | • Are drivers qualified license holders? |
| | | • Are regulations concerning helmets, handlebars, etc., enforced? |
| | | • Are there restrictions on the size of the cycle according to the age of the driver? |
| | | • Are the cycle's lights in good working condition? |
| | | • Are the tires in good condition? |
| | | • Does the cycle have a chain guard? |
| | | • Are the safety devices reliable (horn, brakes)? |
| | | • Does each driver wear the proper head gear? |
| | | • Are drivers encouraged to drive as close to the center line as possible? |
| | | • Do riders always drive with a driver's license? |

# MOTORCYCLE ROAD-E-O MANEUVERS

- **CIRCLE.** Demonstrates correct operation of the controls. Instruct the rider to begin at the starting point, ride around the circle to the left in first gear, operating the high beam switch, horn, left directional signal, and fuel value on the tester's command. (The headlight must be turned on low beam at the start.) The driver should be able to operate the controls without looking at them or hesitating. Deduct points for each time the rider fails to operate control(s) without looking or hesitating.



- **S-TURN.** Demonstrates rider's balance and proper use of controls — clutch, throttle, brake — on a narrow, curved path. Instruct the rider to place his or her motorcycle at the starting point, get his or her balance as soon as possible, and ride slowly through the S curve. The rider should use the clutch, and throttle to keep the motorcycle under control. When the rider clears the end cone, the exercise is over. The rider should not cross over a boundary line or put a foot on the ground while in the S curve. Deduct points for crossing a boundary line, hitting a cone, or putting a foot down while in the curve.

- **FIGURE 8.** Demonstrates balance and shifting skill. (The circle part of the Figure 8 should be about 20' wide.) The rider should be able to handle the cycle while turning different directions. Deduct points for failing to stay on the line, failing to keep balance, skipping or hitting cone(s), or putting a foot down.

- **SPIRAL.** Demonstrates the ability to keep the motorcycle in an upright position and moving while going around in decreasing circles. Instruct the rider to start with a wide circle and progress into smaller and tighter circles without putting a foot down, stopping, or stalling the engine. Deduct points for putting foot down, stopping, or stalling the engine.

- **SERPENTINE.** Demonstrates balance and control in a limited space. Instruct the rider to place his or her new motorcycle at the starting point, begin riding forward to the row of cones, pass to the right of the first cone, then to the left of the second cone, and so on in a weaving pattern. The rider should stay as close to the cones as possible. The rider can use clutch, throttle, and brakes as needed. The rider should start the course at the tester's command. Deduct points for skipping or hitting cone(s) or for putting a foot down.

- **TRIPLE CIRCLE SHIFT.** Demonstrates balance and shifting skill. A tester should stand in the middle of the center circle. As the rider starts the course in first gear, the instructor will call when to shift up or down from first to second to third gear. The rider should be able to keep a front wheel on the white line marking the course. Deduct points for hesitating, putting a foot down, missing the white line, or shifting incorrectly.

## SCORING

Set up your score sheet similar to the one below. A 100-point scale is suggested; a score of 85 would be considered a good score.

| NAME | Circle | S turn | Figure 8 | Spiral | Serpentine | Triple Circle Shift | TOTAL |
|---|---|---|---|---|---|---|---|
| 1. | | | | | | | |
| 2. | | | | | | | |
| 3. | | | | | | | |
| | | | | | | | |

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SPIRAL



TRIPLE CIRCLE




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**PROJECT: TRAFFIC SAFETY PROGRAMS AT SPORTS EVENTS**

Objective: To reach drivers by giving safety tips at sports events. (This project can be especially helpful in those areas that experience hazardous winter driving.) You may wish to say "The _____ safety committee" instead of "we" in sample announcements below.

Procedure:

- Use the public address system for spot announcements before, during, and after the games.
- Inform the principal about the project. Give him or her a written description of the activity, its purpose, and when and how it is to be conducted.
- Secure approval of the athletic director.
- Ask the advisors, presidents, and captains of the pep club, cheerleading squad, and drill team to work cooperatively with your committee on this project. Attend a meeting of each to explain the project and its purpose. Ask for ideas on how you can most effectively conduct the project together.
- Develop slogans for posters and/or spot announcements. Examples include:
  - "The drinking driver gets a trooper as a chaser."
  - "The streets are snow covered, and there is poor visibility. Keep from being plowed — drive carefully."
- Clearly print posters using colors and illustrations for reader appeal and recognition.
- Call local and state police to obtain accurate and current road conditions and accident information during the athletic event. (Do not use the police emergency numbers, however.) Weather conditions and how to cope with them for safe driving are especially good for sports.
- Type spot announcements for the announcer. The announcements should be short and to the point; they are particularly effective if given just as the crowd is beginning to leave. Examples of spot announcements are:
  - "We have enjoyed having you at the game. As you leave, please cooperate with the police officers who are directing traffic. A little patience will help all of us get home safely."
  - "Our school joins the local police department is requesting your help moving traffic safely after this game. When you drive, please be careful."
  - "There has been an accident on _____ Street; get home quicker by taking _____ Street instead."
  - "Weather conditions tonight are not very favorable. Bridges and highway overpasses are iced over — please slow down and approach these areas with caution."
  - "Your loyalty to the school in attending our games this season is appreciated. Please drive carefully on your way home, so you can be with us again for our next game."

**UNIT 7**

**PROJECT: VOCATIONAL EDUCATION SAFETY**

Concept: This project is presented only in terms of objectives and responsibilities. It does not contain specific student activities.

Objectives:

1. To develop a permanent safety consciousness in students through teacher example by always doing things the safe way while pointing out the potential hazard.
2. To teach accident prevention with a positive approach by stressing the right way to perform an operation.
3. To give laboratory demonstrations emphasizing the safe use of potentially hazardous machines and tools.
4. Present safety instruction with the following in mind.
   (a) To develop in students a sense of responsibility for their own safety and that of others.
   (b) To emphasize importance of hair protection and clothing to safety.
   (c) To help students understand that the safe way of doing things is effective.
   (d) To help students recognize situations involving potential hazards.
   (e) To help students learn safe practices to use in their own day-to-day activities.
5. To provide instruction on what to do in case of an accident.
6. To give periodic demonstrations on the proper use and care of personal protective devices.
7. To use information sheets dealing with general safety rules.
8. To provide instruction in the basic maintenance of tools, machines and equipment.
9. To provide instruction in the safe methods of lifting and/ or moving heavy equipment or other loads.
10. To provide a bulletin board for safety bulletins, safety posters, and safety rules and regulations.
11. To require all beginning students to make a careful study of potential hazards during the *first few days* of the course.
12. To utilize a student safety committee to strengthen the safety program.

Responsibilities:

1. Vocational Education Responsibility:
   (a) The school board, the administration and the instructor have the legal responsibility to provide a safe place for students to work while they are participating in vocational education activities.
   (b) To protect yourself and your school district from liability you should be familiar with the codes and regulations applicable to your program.
   (c) To protect yourself against financial loss, liberal liability insurance limits should be carried, either through the school district policy or as an individual.
   (d) Liability insurance can vary substantially among school districts. You should be aware of the limitations of your school district liability policy.
   (e) Individual coverage may be expanded through education associations or through your personal insurance agent or broker.
   (f) Safety is not a "one man show." The school board and superintendent, the district safety coordinator, the administrator (principal and/or department head), and the teacher all need to do their part.

2. School Board and Superintendent:

   (a) The school district controls budget, curriculum and personnel policy to a major degree. With district level support, safety program effectiveness will at best be spotty — carried by dedicated personnel and ignored by others.

   (b) The following functions are considered the responsibility of the school board and the superintendent in a comprehensive vocational education safety program.

   - A policy statement should be adopted by the board of school directors.
   - Appoint a safety coordinator for the school district and adopt a job description that reflects that responsibility.
   - Provide separate funding for facility maintenance and improvements, and safety supplies and equipment necessary to produce a safe instructional environment.
   - Provide for the inservice training of teachers in the area of safety.

3. District Safety Coordinator:

   (a) Each school district should have a safety coordinator. Teachers and the building administrator should rely on the district safety coordinator for assistance and consultation in their accident prevention endeavors.

   (b) The following functions are considered the responsibility of the district safety coodrinator:

   - Coordinate school safety functions.
   - Set up school safety committees.
   - Provide for and participate in school safety inspections.
   - Establish a communication system to keep teachers and administrators abreast of new standards and procedures.
   - Provide for and assist in establishing teacher in-service training programs.
   - Provide for and assist in the implementation of safety instruction programs for students.
   - Provide and assist in the investigation of and recording of accidents and injuries.
   - Research special safety problems.
   - Obtain and disseminate regulatory material (policies, guidelines, inspection checklist, posters, etc.).
   - Maintain a liaison with the local governmental and industrial agencies and the Department of Labor.
   - Analyze and report all accidents.

4. The Administrator, Principal and/or Department Head:

   (a) The individual school is the central unit of an educational enterprise. Therefore, the building principal is likely to be the administrator who is most directly responsible for the school's vocational education safety program. If a specialized supervisor or department head functions with the principal and works directly with the teachers, some of the responsibilities for the safety program may be delegated.

   (b) The following functions are considered the responsibility of the school administrator in a comprehensive vocational education safety program.

   - Secure support from and maintain liaison with top school system administration.
   - Secure approval for the safety education program.
   - Secure adequate budgetary support.
   - Expedite building and equipment changes necessary for safe operation.
   - Arrange for the procurement of safety equipment.

- See that appropriate staff members are kept informed of the specific maintenance requirements for safe operations of vocational education facilities.
- Carefully select vocational instructors for specific knowledge and ability to establish safe practices, procedures and environment.
- Arrange for administrative measures to reduce liability exposures of vocational staff members.

- Provide leadership in safety program planning.
  - Initiate a specific program of safety education.
  - Set up teacher in-service training in accident prevention.
  - Encourage the instructional staff to maintain first aid proficiency. Require that safety supplies and emergency handling procedures are current and properly organized.
  - Encourage the instructional staff to be knowledgeable and proficient in the use of fire apparatus.
  - Instruct the vocational staff members in the use of this safety manual and the development of a comprehensive safety program.
- Secure action on a program of safety education that will involve not only the vocational student but the entire student body.
  - Check periodically to make sure an adopted safety program is in effect.
  - Observe teachers for assurance that safety instruction is a functioning part of the course of study.
  - Stimulate the discovery, analysis and prompt correction of unsafe conditions or practices.
  - Support teachers in enforcing safety regulations.
  - Receive and review accident reports.
  - Utilize district procedures for investigating and analyzing accidents.
- Provide safe facilities and services.
  - Report to higher administration personnel unsafe conditions which cannot be corrected at school level.
  - Plan with teachers for the correction of unsafe conditions and other hazards, and for the installation of safety devices.
  - See that facilities are inspected regularly for condition of equipment and safety devices, proper housekeeping, adequacy of exits, ventilation and material handling systems. Make necessary improvements as indicated by the inspection review.
  - See that safety and applicable safety regulations are specifically reviewed in the planning of new or remodeled facilities.
  - Provide class sizes that are in keeping with the capacity, square footage, and number of work stations available in each facility.
  - Provide a procedure for the removal of students who repeatedly violate established safety rules and regulations and are identified as safety hazards.
- Secure cooperation of outside personnel and agencies.
  - Assist teachers in locating qualified community personnel and services that can provide resources for the safety program.
  - Encourage qualified outside individuals to become involved in the school safety program.
  - Establish communication with parents and members of the community for developing a positive attitude toward safety and the safety program.

5. The Teacher:

(a) The *major* responsibility for safety instruction in accident prevention falls on the teacher. The following are considered the responsibilities of the teacher in a comprehensive accident prevention program.

- Incorporate safety instruction in the course of study and maintain documentation as to who received instruction and when instruction was given.
- Present the instruction on potential hazards and accident prevention specific to the particular school laboratory.
- Instigate a comprehensive safety program for your particular school laboratory.
- Develop specific safe practices, rules, and regulations relating to your facilities and provide for their enforcement.
- Keep informed of new and accepted safe practices for accident prevention.
- Provide proper instruction in use of all tools, machines and equipment. Keep a record of each student's attendance, safety training and safety evaluation.
- Require that a student receive the required safety instruction prior to working in the laboratory.
- Set a proper safety example for students to follow.
- Insist that adequate eye protection be worn at all times.
- Insist on proper protective equipment in all shop areas and require students to wear proper clothing and adequate hair guards while working in the laboratory.
- Devise and enforce safe housekeeping procedures.
- Insist that guards meeting accepted standards be provided and used whenever a machine is operated.
- Establish and maintain the safest possible working environment.
- Have set, pre-planned procedures in case of an accident or emergency.
- Provide prompt and thorough reports of accidents including:
  - Written report by instructor
  - Written accounts by witnesses
  - Photographs of accident scene and conditions
- Always provide for the supervision of students in the classroom or laboratory in accordance with legal requirements.
- Be aware of the emotionally disturbed and accident prone student.
- Regularly review laboratory facilities to maintain safe conditions. Give special attention to:
  - Layout
  - Utilities and building services
  - Equipment guarding
  - Storage and condition of tools
  - Storage, labeling and handling of materials
- Make recommendations to administrators for improving safety conditions.
- Carry out recommendations of administrator for improving safety instruction.

# Section III

# Resources

## SAFETY LEAFLETS

AMERICAN ACADEMY OF PEDIATRICS

COMMITTEE ON ACCIDENT AND POISON PREVENTION

The following nine leaflets are reproduced in this handbook in accordance with a copyright release from the Committee On Accident and Poison Prevention.

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# Infant furniture recommendations

**Recommendations for cribs:**
Cribs should have slats not more than 2-3/8 in. apart.

No hanging crib toys should be within reach.

The wood surfaces should be free of splinters and cracks, and have lead-free paint.

The end panels should be made of a material which will not splinter.

There should be no cross bars on the sides.

The sides, when lowered, should be 4 in. above the mattress.

The sides should be operated with a locking, hand-operated latch which is secure from accidental release.

The mattress should be the same size as the crib so there are no gaps to catch arms or legs. The minimum rail height should be 22 in. from top of railing to mattress set at the lowest level.

Jumpers and walkers should have no pinch points. They should have guards over coil springs and locking devices that avoid collapse.

The furniture should meet the standards of the Consumer Product Safety Commission.

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# Protect your baby

**7 to 12 months**

Babies now crawl, sit, stand, and may begin to walk. They put everything in their mouths. Babies need protection so they can probe and explore in a safe environment.

**Drowning:** Don't leave the baby alone in the bath for any reason. It takes only seconds for an infant to risk drowning.

**Toys:** Toys should be washable, unbreakable, too large to swallow, and have no points or sharp edges.

**The Kitchen — A High Risk Area:** Hot liquids, hot foods, electric cords on irons, toasters and coffee pots should be kept out of reach. Avoid using tablecloths which can be pulled down. Keep bleach, cleaning, and polishing agents on a high shelf.

**Poisons:** Medicines and poisons should be kept out of sight and out of reach. Do not store lye products in the house. Keep all hazardous products in their original containers. Use child-safe packaging for all medications. Keep a 1 oz. bottle of Syrup of Ipecac in your medicine cabinet for use in an emergency.

**Strangulation and Suffocation:** Do not put necklaces or pacifier cords around the baby's neck. Do not allow the baby to play with small objects which can be swallowed. Do not give the baby large pieces of food which may cause strangulation or suffocation.

**Falls:** Use gates for stairways, but be careful with folding gates. Lower the crib mattress as the infant begins to sit or stand.

**Burns:** Place guards in front of open heaters and fireplaces, around steam radiators, hot air registers, and floor furnaces. Buy only flame retardant sleepwear. Check water temperature with your elbow. Water faucets should be turned off when the baby is in the bath. Temperature regulator on hot water heater should be set no higher than 120°F.

**Dangerous Objects:** Use safety plugs in wall sockets. Keep scissors, knives, and breakable objects out of reach. Remove sharp-edged furniture from the infant's play area.

**Automobile Travel:** Use a child restraint system that has been proven safe with dynamic testing. Do not hold your infant in your lap.

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# Protect your child

**1 to 2 years**

Children of this age are mobile and have an urge to investigate. They climb, open doors and drawers, take things apart, enjoy playing in water. They are interested in what they are doing, not the danger that may be present. **Watch your child.**

**Falls and Cuts:** Doors and screens at stairways, driveways, storage, and other hazardous areas should be safety fastened. Use plastic dishes and cups. Check furniture for safety features. Remove furniture with sharp edges. Use nonskid mats in bathtub. Install guards on windows above the first story.

**Burns and Electric Shocks:** The kitchen is dangerous. Never leave a child alone in the kitchen. Teach the meaning of "hot". Turn pot handles to the wall. Use back burners. Remove knobs from stoves when not in use. Keep matches locked up. Cover electric outlets with safety plugs. Electric cords attached to coffee pots or other appliances should be kept out of reach. Put guards in front of wall heaters and fireplaces, and around steam radiators, hot air registers and floor furnaces.

**Aspiration:** Toys should be unbreakable and have no small parts. Do not give children this age nuts, popcorn, balloons, or chewing gum.

**Drowning:** Never leave your child alone in bathtub or other water. Even shallow water is dangerous. Children should be accompanied by an adult when going to a pool, lake, or pond.

**Auto Safety:** Do not allow children to play in the driveway. Put safety latches on car doors. An approved child safety car restraint/seat must be used at all times in a car. Children must hold an adult's hand when crossing streets.

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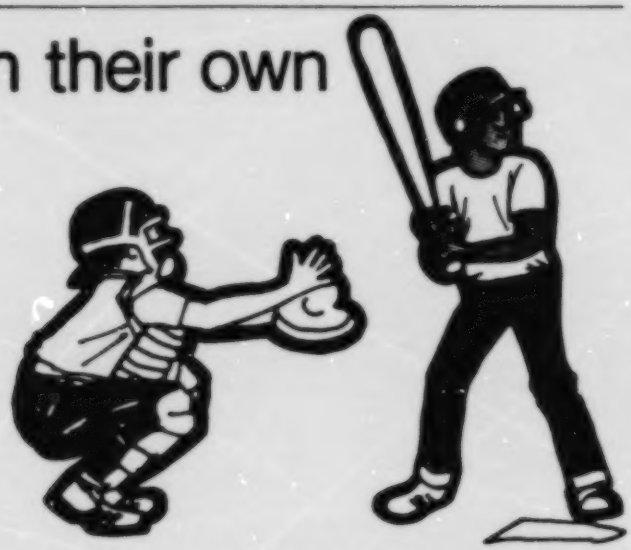
# Safe on their own



**6 to 12 years**

**Discipline and Loving Guidance are Essential:** Now your child is away from home hours at a time. The school and other community groups share the responsibility for their safety. Your child is active in sports, is part of a group, and will "try anything once." He/she may idolize an older person who lives dangerously. Children this age should assume some responsibility for their own safety.

**Traffic Safety:** Parents set examples by driving carefully, observing traffic laws, and using seat belts.

**Minibikes:** Minibikes are unsafe. Do not allow your child to ride a mini-bike — on or off the street.

**Bicycle Riding:** Use an appropriate-sized bike for your child. Be certain the bicycle is safely equipped. Teach safe riding and rules of the road. Shoes should be worn while riding. No passengers should be allowed. If the bicycle is to be used at night, lights and reflectors should be installed.

**Firearms:** Lock up. Never keep loaded. Store ammunition separately.

**Suffocation:** Do not allow your child to play near excavations, sand and gravel pits, abandoned mines.

**Sports and Recreation:** Provide supervision. Insure that protective equipment is adequate, in good repair, and is used.

**Power Tools:** Teach the safe use of power tools used in and around the home.

**Fire:** Teach the dangers of handling gasoline, charcoal lighting fluid, and other hazardous petroleum products.

**Drowning:** Provide adult supervision and teaching for swimming and boating.

**Teach Safety:** Continue to teach safety rules to your child by example as well as by words.

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# Safety around animals

**All Animals Bite.** Any animal that is caught or injured is apt to bite. The most gentle of pets may bite if annoyed while eating or sleeping, frightened, injured, or ill. Even caged guinea pigs or rabbits will bite a poking finger. Beware of any animal acting strangely, or of "friendly" wild animals.

If menaced by a dog, stand still, face him, and talk to him gently. If attacked, protect the neck and face with crossed arms. If chased while on a bicycle, dismount with the cycle between you and the dog.

Dogs should be restrained when strangers visit.

Animal bites may lead to:
1. Infection.
2. Rabies. All animals — wild or domestic — can carry rabies. Dogs, bats, foxes, and skunks frequently transmit the disease.
3. Tetanus.

Serious injury can be inflicted by animal claws and hooves.

**PROTECT YOUR CHILD**

**Parents:** Protect your child; teach him to respect animals. Prevent your own pet from being a hazard to children. When purchasing a pet:

Consider the health, maturity, size, and disposition of both child and pet. Check out the animal's personality characteristics before making a final decision.

Any pet becomes frightened and may bite if a child puts his face close to the pet's face.

Cats and dogs should be immunized against rabies.

**PROTECTION — EDUCATION**
**DISCIPLINE — LEAD TO SAFETY**

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# Safe swimming for your boy and girl

Any infant who has learned to crawl should be taught to float, thus reducing the chance of drowning in the critical age group, 1 to 3 years.

Children should be taught to swim in and under water by a qualified instructor.

The minimum age for organized instruction should be three years.

Never swim alone.

Use the buddy system.

Swim only in supervised areas and never among anchored boats or in motor boat lanes.

Before diving into water, be sure it is deep enough and that the bottom is free of broken glass, stones, or other dangers.

Do not swim during storms or when lightning is present.

Floating devices and toys should never be used as life preservers as they may deflate or carry you far from shore.

If you should swim or drift far from shore, remain calm, rest, tread water, or float on your back until help arrives. Keep your hands under the surface of the water for better body position, balance, and aid in floating.

If you are caught in a current, do not buck it. When the current runs outward from shore, partially drift and swim diagonally across it. You will soon reach water where there is no outbound current and perhaps a current toward shore.

Be conscientious of other swimmers. Observe the rules of water safety posted where you swim.

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# Suggestions for the baby sitter

Always ask for and discuss full instructions with the parents.

In case of fire, get the children out of the house immediately, taking them to safety at a neighbor's house. Call the fire department first, the parents next.

Always phone for help if you are concerned or in doubt about any occurrence.

Never open the door to any strangers or have visitors of your own.

Never leave the children alone in the house — even for a minute.

Never give any medicine or food unless instructed to do so.

Always remember that your primary job is to care for the children. Tender loving care usually quiets an awakened child.

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# Tips for teenagers

**Sports:** Teen-agers should be thoroughly familiar with sports rules and be instructed in proper use of equipment in snowmobiling, ball sports, snow and water skiing, swimming and diving, sledding, motor-biking, bicycling, camping, and boating.

**Drug Abuse Is Internal Pollution:** Teen-agers should be thoroughly instructed on the dangers and side effects of drugs. Alcohol also is a drug! Parents should set an example by using only drugs prescribed by a physician for a specific disease.

**Smoking:** Teen-agers should know all the dangers and the latest medical information on the side-effects of smoking. Parents are obligated to set a good example. Teen-agers are turned off by parental hypocrisy.

**Auto Safety:** Teen-agers should complete a certified driving course before being allowed to drive an automobile.

**Baby Sitting:** Teen-agers should be given courses in baby sitting, with instructions on what to do in case of injury, accident, or illness.

**Sex Education:** Teen-agers should be given competent sex education and be aware of the signs and symptoms of venereal disease.

**First Aid:** All teen-agers should be given instruction in first aid, including external cardiac massage and mouth-to-mouth resuscitation.

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# Toy buying for safe and happy playtime

Keep informed of toy safety. Read up on the newest toys and safety hazards.

When buying toys, consider the child's age, personality, experience, and environment.

Teach your child to play with toys safely.

Supervise your young child's play.

Repair or discard damaged and broken toys.

Teach your child to store toys safely and away from traffic areas, stairs and younger siblings.

Protect younger children from the potentially dangerous toys of older children. Babies are curious and will investigate a toy, frequently by putting it in their mouths. Children may break or tear toys apart to investigate the insides.

Choose toys that cannot cause burns. Avoid electrical plug-in toys (i.e. cooking toys, melting-molding toys) unless you are planning to supervise their use.

Choose toys made of or containing nontoxic materials and with lead-free paint. If there is a young child in the home, avoid buying toys made of small parts that can be swallowed.

Plastic toys for young children should have rounded edges and be resilient, not brittle and easily broken.

Avoid impulsive toy buying because of enticing ads.

Teach your child not to use toys as missiles or weapons.

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## RESOURCES

This section contains a listing of agencies and companies that can provide resource materials. The agencies and companies are alphabetized with addresses. Any prices listed are subject to change.

**ALLSTATE INSURANCE**
Regional Office 1230 Raymond Road
Jackson, MS 39205

Pamphlets:

"Why You Should See Red Over Arson!"
"The Drunk Driver May Kill You"
"The Joy of Bicycling" (for adults)
"Driving Enemy No. 1"
(re: rear end collisions
"Drive prepared!"
(re: defensive driving)
"Adventure by Bicycle"
(tips for the young rider on bicycling fun, safety, and rules of the road)
"Expressway Driving Is Different!"
"A Matter of Minutes"
(to be used with next item)
"Checklist to Prevent Fires"
"Safe Skippers Ahoy!"
(a beginner's guide to small craft boating)

**AMERICAN ACADEMY OF PEDIATRICS**
P. O. Box 1034
Evanston, IL 60204

Publications:

A listing of Safety and First Aid Booklets
A listing of some Common Household Substances Which May Be Poisonous

**AMERICAN ALLIANCE FOR HEALTH, PHYSICAL EDUCATION, RECREATION, AND DANCE (AAHPERD)**
1201 16th Street NW
Washington, DC 20036

Publications:

Sports Safety: "Accident Prevention and Injury Control in Physical Education, Athletics, and Recreation."
"Administration and Supervision for Safety in Sports"
"Accident Surveillance Systems for Sports"
"Safety in Aquatic Activities"
"Safety in Individual and Dual Sports"
"Safety in Outdoor Recreational Activities"
"Safety in Team Sports"

**AMERICAN ASSOCIATION OF POISON CONTROL CENTERS**
℅ Anthony R. Temple, M.D.
McNeil Consumer Products Company
Fort Washington, PA 19034

Flyers:

"When Times Get Hot": Lists the stressful times when accidental poisonings may occur and urges parents to be more alert in those situations. Single copy free.

"Syrup of Ipecac": 5" x 8" color illustrated flyer urging parents to keep syrup of ipecac in the home so that it is readily available if a physician recommends it be used. Single copy free.

"Home Checklist": 8½" x 11" flyer which helps to locate trouble spots in the home as they relate to accidental poisonings. Single copy free.

"First Aid for Poisoning": 5" x 8" card on first aid instructions for poisoning emergencies. Up to 200 free.

Pamphlets:

"Poison Isn't Kid Stuff": Four page color pamphlet that suggests dangerous household products be kept away from children and medical advice be obtained whan a poisoning is suspected. Single copy free.

**AMERICAN AUTOMOBILE ASSOCIATION**
Mr. K. Alsous
Managing Director, Public Affairs
8111 Gatehouse Road
Falls Church, VA 22042

Pamphlets:

"Gas Watcher's Guide"

**AMERICAN CHEMICAL SOCIETY**
Committee on Chemical Safety
1155 Sixteenth Street, N.W.
Washington, DC 20036

Booklets:

"Safety In Academic Chemistry Laboratories"
No charge for a single copy.
Available in quantity at $1.00 per copy.

**AMERICAN DRIVER AND TRAFFIC SAFETY EDUCATIONAL ASSOCIATION**
1201 16th St., N.W.
Washington, DC 20036
Ask for list of publications

**AMERICAN INSURANCE ASSOCIATION**
Engineering and Safety Department
85 John Street
New York, NY 10038

Pamphlets:

"You're Going Out and All's Well"
"You're Baby Sitting and All's Well

**AMERICAN MEDICAL ASSOCIATION**
Department of Health Education
535 N. Dearborn St.
Chicago, IL 60610
Ask for catalogue

Publications:

"Danger Lurks": Contains information on what to do in case of accidental poisoning.

**AMERICAN NATIONAL RED CROSS**
Washington, DC 20006

Books: Contact local Red Cross chapter for nearest available source.

"American Red Cross Standard First Aid and Personal Safety Book"
"Lifesaving: Rescue and Water Safety"
"Swimming and Water Safety"

**AMERICAN SEAT BELT COUNCIL**
1730 Pennsylvania Ave., N.W
Washington, DC 20006
Ask for materials on seat belts

**AMERICAN TRUCKING ASSOCIATION**
Public Relations Department
1616 P Street, N.W.
Washington, DC 20036

Pamphlet:

"The Fuel You Save Today May Be Your Fuel Supply Tomorrow"

**BUTTERICK PUBLISHING**
P.O. Box 1945
Altoona, PA 16603

Films:

"Health and Safety: Keeping Fit"
4 filmstrips, 4 cassettes or records, 6 spirit masters, teacher's guide
Part 1 — "In Good Health" (8:44 min.)
Part 2 — "Health In Jeopardy" (14 min.)
Part 3 — "Spending Your Health Dollars" (14 min.)
Part 4 — "For Safety's Sake" (13:45 min.)
Cost: $85.00

**CAROLINA BIOLOGY SUPPLY CO.**
2700 York Road
Burlington, NC 27215

Booklet:

"Safety First in Science Teaching"

**CENTRON EDUCATIONAL FILMS**
1621 West Ninth St.
Lawrence, KS 66044

Films:

"Fire and Electrical Safety" (K-9)
3 filmstrips, 3 cassettes, teacher's guide
Part 1 — How You Can Help Prevent Fires (8 min.)
Part 2 — What To Do In Case of Fire (6:34 min.)
Part 3 — Handling Electricity Safely (11:15)

**CHANNING L. BETE CO., INC.**
45 Federal St.
Greenfield, MA 01301
Ask for catalogue
Pamphlet topics include: Safe conduct in halls, fire safety, safety in special events, pedestrian safety, bicycle safety, motor vehicle safety, safe use of tools, using outdoor apparatus, water safety, camping and hiking, fishing, and disaster preparedness.

**CHAMPION SPARK PLUG CO.**
Toledo, OH 43661

Pamphlet:

"Tune-up"

**CHRYSLER CORP.**
Mr. H.C. Wood, Manager
Consumer Relations
P.O. Box 1919
Detroit, MI 48231

Pamphlet:

"Your 1977 Guide to Fuel Economy"

**CLEMSON UNIVERSITY**
Cooperative Extension Service
Clemson, SC 29631

Booklet:

"Poisonous Plants of the Southern United States"

**CLOSURE INFORMATION BUREAU**
11th Floor
300 E. 44th Street
New York, NY 10017

Publications:

"Tips on Child Safety": Contains facts on proper use and life-saving effectiveness of safety caps, advise on how to instill safety consciousness in preschoolers, and general home safety tips. Produced by Closure Committee, Glass Packaging Institute. Limited quantities free. Send stamped, self-addressed envelope to *Safety Tips*.

**COUNCIL ON FAMILY HEALTH**
Dept. P.
633 Third Avenue
New York, NY 10017

Publications:

- "First Aid in the Home": Wall chart with first aid measures, plus tips for safe storage and use of medicines in the home. Quantities up to 5 free, larger quantities 10 cents each.
- "The Care and Safety of Young Children": Discusses the basics of home safety and child care, including tips on poison prevention. Quantities up to 5 free, larger quantities 10 cents each.
- "You and Your Health": 12 articles by leading health authorities on major health topics, including accidental poisoning, with a tear-out home Emergency Reference Chart. Quantities up to 5 free, larger quantities 10 cents each.
- "First Aid in the Home": Wall chart with first aid measures, plus tips for safe storage and use of medicines in the home.

**DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE**
Office of Human Development Services
Publications Distribution Unit
Wasnington, DC 20201
Ask for catlogue
Single copies of the publications are free until the supply runs out. Give the title and the DHEW publication

number when ordering. If a GPO number is given, the publication is for sale. If over 100 copies of an item are ordered, a 25% discount is offered. To order from the GPO, give the title, GPO stock number and quantity.
Superintendent of Documents
U. S. Government Printing Office
Washington, DC 20402

Publications:

"Safe Toys for Your Child — How to Select Them, How to Use Them Safely": 1971, eight pages, DHEW #(OCD) 72-2; GPO stock #017-091-00159-6; GPO for sale only.

"Teach Children Fire Will Burn": 1969, 24 pages, Children's Bureau Publication #471; for sale from GPO only, GPO stock #1791-00152-9 (40¢).

"Young Children and Accidents in the Home": 1974, 28 pages, DHEW Pub. #(OHD) &6-30034; GPO stock #017-091-00191-0 (65¢).

"The Pocket Guide to Babysitting": 1974, 48 pages, DHEW Pub. # (OHD)76-30045, GPO stock #1791-00197-9 ($1.20).

**EMPLOYERS INSURANCE OF WAUSAU**
200 Westwood Drive
Wausau, WI 54401
Pamphlets and/or posters on: fire safety, bicycle safety, safe use of tools, water safety.

**GIANT FOOD, INC.**
Consumer Affairs Dept.
Box 1804
Washington, DC 20013

Publications:

"Please Don't Eat the Dieffenbachia!": A listing of common poisonous plants with botanical name, toxic parts and suggested treatment. Free quantities to 25.

**GOODYEAR TIRE & RUBBER CO.**
Mr. Ray Oviatt, Community Relations
Akron, OH 44316

Pamphlets:

"Bicycle Blue Book"
Also, Goodyear sponsors the 4-H Bicycle Program

**HIGHWAY USERS FEDERATION**
1776 Massachusetts Ave., N.W.
Washington, DC 20036
(Remittance must accompany orders totaling less than $5.00)

Publications:

"The Highway Fact Book": Facts and figures concerning highway transportation and safety in the U. S.; 36 pages: $1.00.

"Facts on Vital Issues": Series of 14 fact sheets on subjects related to highway transportation; suitable for filing in a 6" x 9" three-ring binder; $1.00/copy.

"Gas Saving Do's and Don'ts". How to save gasoline with good driving habits and fuel-conserving car care; tips on starting, stopping, and vehicle maintenance free for single copy.

"Automobility Travel Check List": Describes how to safety-check your own vehicle for safe operation; gives tips on steps to take when leaving on a trip, etc.; 10 copies/50¢, 25/$1.50, 50/$2.00, 100/$2.50, 500/$10.00, 1000/$17.50.

"Federation Highway Safety Program": Set of nine leaflets, each focusing on one specific aspect of the highway safety problem. Each defines the problem area and outlines recommended solutions; available individually or in sets of nine; single set or copy free; quantity prices on request.

"The Life Guards in Your Car": A quick summary of the importance of safety belt use and how to get more people to buckle up; single copy free; quantity prices on request.

"Getting the Drunks Off the Road": Concerned with selective police enforcement to get the drunk driver off the roads; single copy free; quantity prices on request.

"EMS: The Difference Between Life and Death": Concerns medical treatment at the accident scene and enroute to emergency facilities; single copy free; quantity prices on request.

"How to Make Pedestrians Safer": single copy free; quantity price on request.

"Wanted: A Nation of Better, Safer Drivers": Concerned with improving driver performance; single copy free; quantity prices on request.

"Let's Make America's Youth Safer": Looks at the youth traffic problem and what can be done about it; single copy free; quantity prices on request.

"Famous Old Roadside Rhymes": The story of the Burma Shave signs, featuring traffic safety-oriented rhymes; ideal for hand-outs at meetings, booths, etc.; four pages; single copy free; 50/$1.75, 100/$3.00, 500/$12.50.

"Who, Me? Demonstrate Safety?": Urges readers to work for better traffic laws, driver education, drunk driving control, and other safety measures; eight pages; single copy free; 25/$2.50, 100/$8.50, 200/15.00, 1000/$55.

"First Aid Tip Cards": Handy card fits in glove compartment, has tips on artificial respiration, handling of bleeding, poisons, bites, and many other emergencies; single copy free; 50/$1.75, 100/$3.00, 500/$12.50.

"Get the Safety Spirit": Minifolder (eight pages) promoting safe driving, gives information on alcohol and driving and on the 55 mph speed limit; single copy free; 50/$2.00, 100/$3.50, 500/$12.00.

"Medical Information Card": Wallet card with standard ID information, also space for doctor's name and phone number, allergies, special medication, blood type, etc; single copy free, 50/$1.00, 100/$1.50, 500/$5.00.

"Reflective Sticker": For door jamb of automobile; warns approaching motorists when door is open; single copy free; 50/$1.75, 100/$3.00, 500/$12.50.

"Automobility — It's Your Freedom To Go!": Set of 3 four page full color pamphlets, each briefly discussing the three elements essential to safe convenient, personalized travel: Driver Responsibility, Vehicle Maintenance, What Highways Mean to You; three sets of 100 each — 300 total $6/set.

"How to Plan and Conduct Your Vehicle Safety Check": Manual detailing how to organize a voluntary vehicle safety-check program, the personnel required, what to do, and how to do it; 16 pages; single copy free, 50¢ for each additional copy.

"Windshield Sticker": Circular blue and white sticker, large check mark and "Safety Checked"; back carries safety slogan and place for inspection date and community name; face-gummed, 2⅞" diameter; single copy free; 400/$8, 1000/$15, 2400/$30, 5000/$49.50.

"Check List": Includes checker's stub, owner's recheck stub, check-off items needing attention, plus questions about safety belt use; single copy free; 400/$8, 1000/$15, 2400/$30, 5000/$49.50.

"Bicycle Test Folder": Learning activity for ages 8-11 (grades 3-6) featuring traffic hazards test; teacher's guide provided with each 30 copies; four pages; single copy 15¢, 25/3.25, 50/5.25, 100/10.50.

"Empty Shoes: The Safety Walk": Leader's guide for teaching children ages 5-8 pedestrian safety fundamentals; features four safety walks with activities; eight pages; single copy 35¢; quantity prices on request.

Safety Bug Club Materials:

"Safety Bug Club Guide": Traffic Safety Programs for Children — 16 page manual telling how to organize a Safety Bug Club, how to interest sponsors and public officials, how to present a Safety Bug program, how to construct a Safety Bug Town or Park with simple plot plans, ideas for things to make, etc.; single copy free; 10/$3.25, 20/$5.50, 50/$12, 100/$20.50.

"Club Pledge Certificate": Signing the pledge makes the child eligible to receive strip of four "I'm a Safety Bug" self-stick membership badges. Note: certificates and badges are generally supplied by units, each consisting of

one certificate and a strip of four badges; single unit free; 25 units/$1.50, 50 units/$2.50, 100 units/$4.25.

"Be a Bug on Safety" skit: Simple three-character skit based on safety rules in certificate, with suggestions for classroom presentation; single copy free, 5¢ for each additional copy.

"Welcome Letter": letter from the "Safety Bug" explaining the benefits of the club; single copy free, additional copies/3¢ each.

"The Safety Bug Song": Safety Bug rules in rhyme with a simple melody; suitable for all ages from K up; also four familiar tunes with safety lyrics; single copy free; 10/$1.75, 50/$5, 100/$8.50.

"Bumper Stickers": Dark green on white self-stick vinyl, 1⅞'' x 14¾'', with smiling "Bug" face and message BE A SAFETY BUG! One sticker free; 10/$2, 25/$4, 50/$6, 100/$10, 500/$40.

Periodicals:

Federation Reporter: monthly newsletter; subscription, $5.00 yearly.

Alert: news bulletin covering major federal developments in highway transportaion and safety, mailed within 24 hours after a story breaks; request subscription information.

Highlights: quarterly newsletter with information about community safety and lists of recent safety publications; four pages, single copy free.

**HUMAN ACTION FOR POISON PREVENTION IN YOUTH**
Two Hardman Drive
Bloomington, IL 61701

Publications:

"Happy's Poison Prevention Activity Book": A forty-four page children's Activity Book that is used by the parent to teach the child to avoid those items that have a SIOP sticker on them.

"Legend of Happy The Poison Prevention Dog": A brochure used to introduce the SIOP Poison Prevention Program to children.

"Parent and Teacher Introduction to The SIOP Poison Prevention Program": A brochure used to acquaint people with the SIOP Poison Prevention Program.

"SIOP's Poison First Aid Chart": A 9'' x 12'' chart listing various categories of Poisons with general First Aid instructions for each.

"SIOP's Poison Prevention Packet": Folder containing eleven various pieces of SIOP's Educational Materials including First Aid Chart, introductory brochures, stickers, safety check list, Activity Book, Poisonous Plant guide, etc. Limited quantities free.

**IMAGINATION, INC.**
1821 University Ave.
St. Paul, MN 55104
Ask for catalogue
Pamphlets cover: fire safety, safety in special events, bicycle safety, motor vehicle safety, water safety, and fishing.

**INSURANCE INFORMATION INSTITUTE**
Mr. John Hilbig
Regional Manager
1001 Howard Ave.
New Orleans, LA 70113
(504) 566-0540

Ms. Nancy K. Golonka
Assistant Director
Educational and Consumer Relations
110 William St.
New York, NY 10038

Order motion picture films and slides on loan from:
Insurance Information Institute
1777 Fidelity Union Tower
1507 Pacific
Dallas, TX 75201
(214) 741-5195

Films:

- "Too High a Price," 16mm, 30 minutes: examines roadside hazards, fragile cars, etc.; outlines a multi-billion dollar problem and points to possible solutions.
- "Products and the Lawsuit Explosion: Who Pays?" 16 mm, 18½ minutes: presents the points of view of insurers, manufacturers, and consumers about causes of product liability.

Slides:

- "Nature's Fury," 50-slide presentation: about what to do before and after a tornado, flood, or hurricane.
- "Jonesboro Tornado," 20-minute slide presentation: based on the destructive tornado that struck Jonesboro, Arkansas, in May 1973; shows what to do before and after a tornado.

Pamphlets to order from publications catalogue, New York address:

- "Deductibles Can Stretch Your Insurance Dollar": shows why insurance rates are increasing and how consumers can save money on premiums; 2¢/copy.
- "Every 10 Minutes": leaflet explaining basic auto insurance coverage, people and property to which it applies, and how rates are determined; 6¢/copy, single copies free.
- "Wanted for Murder: John Barleycorn": examines drunk driver problem and solutions; 5¢/copy; reprint.
- "Bulletin Board Chart — Auto Insurance": a chart that summarizes automobile insurance coverages and the people and property to which they apply; for high school and junior college ages; 50¢/copy; order from N.Y.

Filmstrips available from N.Y. address:

- "Automobile Insurance": 35mm filmstrip; color-cartoon treatment about bodily injury and property damage coverages and factors affecting rates and cost; with cassette tape or disc recording and teacher's guide; $10.
- "Home Insurance Filmstrip": 35mm, art treatment for teaching home insurance in a class; with cassette tape or disc recording and teacher's guide; $10.
- "Walking to School Without Getting Hurt": 35mm, photographic treatment of safety hazards encountered by youngsters; for use in elementary school, K-Grade 3; narrated by two Grade 4 students; with cassette tape, $20.

**INSTITUTE OF MAKERS OF EXPLOSIVES**
1575 Eye Street, NW
Suite 550
Washington, DC 20005
Write for free posters and related safety materials relating to blasting caps and explosives.

**INSURANCE INSTITUTE FOR HIGHWAY SAFETY**
Watergate 600, Suite 300
Washington, DC 20037
Publication: "Status Report"

**KEMPER INSURANCE COMPANIES**
C. W. Meinhardt
Communication Services Supervisor
Long Grove, IL 60049

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Pamphlets: (First five copies ordered free)

- "Children's Safety Lessons Coloring Booklet": Safety lessons in verse with pictures to color; form #XZA 1127-6; 8¢/additional copy.
- "Children's Fire Safety Lessons Coloring Booklet": Form #XZK 14-2; fire safety lessons in verse with pictures to color; 7¢/additional copy.
- "Home Inspection Folder": Form #XZK 19-2; checklist to make sure home is protected from fire hazards; 5¢/additional copy.
- "Your Vacation Checklist Folder": Form #XZK 64; checklist on things to do before leaving and while on vacation; 4¢/additional copy.
- "Silent Menace in Your Home": Form #XZK 65-1; what to do in case of explosion or exposure to toxic gases, plants, burn, or injuries around home; 6¢/additional copy.
- "Bike It": Form #XZK 196; tips on safe bike riding and care of bike; 7¢/additional copy.

**MALLINCKRODT, INC.**
Science Products Division
P. O. Box 5439
St. Louis, MO 63100

Booklet:

- "Laboratory Safety Handbook"

**MANUFACTURING CHEMISTS ASSOCIATION**
1825 Connecticut Avenue, NW
Washington, DC

Film:

- "Safety in the Chemical Laboratory"

**MARLIN FIREARMS COMPANY**
North Haven, CT 06473

Booklet:

- "Marlin Hunter's Pocket Guide": Gives the Ten Commandments of Firearms Safety, hunting ethics, conservation facts and hints for hunters.

**MARL CHUCK FILM INDUSTRIES, INC.**
P. O. Box 61
Mt. Prospect, IL 60056

Films:

- "250,000 Ways to Destroy a Child's Life Without Leaving Home": A 15 minute, color presentation which, by emphasizing the vast number of poisoning hazards that are present in the average home, shows the perils to watch out for at each stage of a child's development.

**3M CORPORATION**
Traffic Control Products Division
3M Center, Bldg. 224-62
St. Paul, MN 55101
Pamphlets cover: pedestrian safety and motor vehicle safety.

**MODERN TALKING PICTURES**
2322 New Hyde Park Road
New Hyde Park, NY 11040

Films:

- "The Travels of Timothy Trent": Ten minute, 16mm, color sound film. Tells parents and others responsible for the care of young children how safety packaging protects from accidental poisoning. Free discussion materials also available with this film. Available on free loan.

**NATIONAL AGRICULTURAL CHEMICALS ASSOCIATION**
1155 Fifteenth Street, NW
Washington, DC 20005

Publications:

- "Pesticide Safety Literature"
- "Safety at Home with Pesticides"
- "Stop and Read the Label Before Using Any Pesticide"

**NATIONAL AUDIOVISUAL CENTER**
Reference Section RL
General Services Administration
Washington, DC 20409

Films:

- "Safety Consciousness"
- "Safety in the Shop"
- "The Safest Places in Schools"

**NATIONAL COMMITTEE ON UNIFORM TRAFFIC LAWS AND ORDINANCES**
Washington, DC 20402
Ask for "Uniform Vehicle Code and Model Traffic Ordinance."

**NATIONAL FIRE PROTECTION ASSOCIATION**
470 Atlantic Ave.
Boston, MA 02210
(617) 482-8755

Pamphlets: (single copy free if you send a self-addressed #10-size envelope stamped with first class postage)

- "Fire Prevention All Over Your Home"
- "In a Fire Seconds Count"
- "Home Fire Detection"
- "Don't Play with Fire Outdoors"
- "Babysitter's Handbook"
- "EDITH No. G-122": Exit drills in the home
- "EDITH No. G-56": Home Fire Check Sheet
- "EDITH No. G-120": Christmas Checklist

Films: (Films are rented by ordering from NFPA Film Library, 470 Park Avenue South, NY, NY 00016, or by calling 212-684-5910. Give the catalogue number, title, rental fee, shipping destination, show date, and alternate date. Allow 15 days for shipping; add $2.25 per film for handling and insurance charges ($3.50 for "Close Up on Fire"). Return films postage paid, insured, the morning after your showing. NFPA suggests contacting the state fire marshal's office or local fire departments for funding.)

- "Close Up on Fire": #FL-33; 54 minutes; 16mm; color, sound; daily rental rate $65; documentary produced by ABC News discussing high-rise building practices and flammability of children's clothing.
- "Don't Get Burned": #FL-36; 22 minutes; 16mm; color, sound; DRR $20; provides lessons on fire prevention to young people.
- "Playing With Fire": #FL-39; 16 minutes; 16mm; color, sound; DRR $25; Walter's story: through his eyes, children and parents learn the consequences of playing with fire.

- "Learn Not to Burn": #FL-41; nine minutes; 16mm; color, sound; DRR $15; eleven fire safety messages from Dick Van Dyke; points out common home hazards and gives fire prevention tips for each.
- "When Your Clothing Burns . . .": #FL-44; 18 minutes; 16mm; color, sound; DRR $28; examines problem of clothing fires and what we can do to best protect ourselves and our families against fire.
- "Using Fire Extinguishers — the Right Way": #FL-45; 13 minutes; 16mm; color, sound; DRR $20; tells how to use fire extinguishers; stresses importance of knowing where extinguishers are located, proper maintenance, which fires not to fight.

**NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION**
400 Seventh St., S.W., Room 5202
Washington, DC 29590
Pamphlets include: pedestrian safety, bicycle safety, motor vehicle safety, and sidewalk vehicle safety.

**NATIONAL INSTITUTE OF HEALTH LABORATORIES**
Public Health Services
Bethesda, MD 20014

Films:

- "Chemical Lab Safety"

**NATIONAL JAYCEES**
Box 7
Tulsa, OK 74102
Ask for information about the drinking driver.

**NATIONAL RIFLE ASSOCIATION**
Public Relations
1600 Rhode Island Ave., N.W.
Washington, DC 20036
Pamphlets and films cover fishing, hunting, etc.

**NATIONAL SAFETY COUNCIL**
School and College Department
425 N. Michigan Ave.
Chicago, IL 60611
Ask for their catalogue

Pamphlet and/or poster topics include: fire safety, safety with animals, pedestrian safety, bicycle safety, sidewalk safety, safe use of tools, outdoor safety, organized games, water safety, camping and hiking, fishing and disaster preparedness.

Publications include:

- "Accident Fact Book"
- "Safety Survey for Schools"
- "Accident Reporting Guidebook"
- "Encyclopedia of School Safety": collection of 101 safety education data sheets in bound edition; stock number 429.07, $18/set.
- "Children's Safety Puzzles": 16 pages of games for children; soft-cover; stock #084.04; minimum order of 10, 28¢ each.
- "Bicycle Safety Information Test": quick 25-question quiz with answers on bicycle safety for the elementary bike rider; stock #429.99; minimum order of 100, 14¢ each.
- "Bicycle Safety Maintenance Manual": 12-page publication designed for use in conjunction with the inspection checklist; stock #450.21; order 100/25¢.

- "The Bike Book": a seven page pamphlet with tips for children on bike safety; stock #399.91; minimum order of 50, 9¢ each.
- "All About Bikes Program": elementary level, a complete packaged program consisting of a teaching guide, student activity book, artwork packet, and case file cards; for details and prices write for brochures #113-160 and #1401-9.
- "All About Fire": a creative, activity-packed, self-contained program designed to teach elementary students basic fire safety concepts; contains 12 duplicating masters, teacher's guide, and activity suggestions; specify level: K-Grade 1, Stock No. 599.86; Grades 2-3, Stock No. 599.87; Grades 4-6, Stock No. 599.88 — $3/each.

**NATIONAL SAFETY COUNCIL**
444 N. Michigan Avenue
Chicago, IL 60611

Publications:

- "Poison Prevention Program Kit": Basic materials for a complete community-wide poison prevention program.
- "Accident Fact Book"
- "Safety Survey for Schools"
- "Accident Reporting Guidebook"
- "Encyclopedia of School Safety"

**NATIONAL SAFETY TOWN CENTER**
P. O. Box 39312
Cleveland, OH 44139

Safety Town is an early childhood safety education program. The Center aids anyone interested in setting up a Safety Town program. Guides that are available include the organizational guide, parents' guide, and general information guide.

**NORTHEAST IOWA POISON INFORMATION AND TREATMENT CENTER**
Allen Memorial Hospital
Waterloo, IA 50703

Booklet:

- "Kandy Says: Keep Poisons Out of Reach"

**OKLAHOMA STATE DEPARTMENT OF EDUCATION**
Oklahoma City, OK 73105

A Guide for Teaching Safety Education

**OUTBOARD BOATING CLUB OF AMERICA**
401 North Michigan Avenue
Chicago, IL 60611

Pamphlets: (single copies free, some may be purchased at cost)

- "(Almost) Everything You Wanted to Know about Boating Safety": features fundamentals of boating safety; 7¢ each, $60.00/1000.
- "Small Boat Handling": 32-page introduction to seamanship, trailering, and boat operation; 15¢ each, $14/100.
- "You and Your Boat": 28-page guide to powerboat ownership, operation, maintenance, 15¢ each, $15/100.
- "Rules of the Road" decal: 4¾" x 2½" vinyl decal for posting near the helm; lists 10 important checks to be made before starting the engine; 5¢ each, $5.50/100.

**PREFERRED RISK MUTUAL INSURANCE COMPANY**
1111 Ashworth Road
West Des Moines, IA 50265

Pamphlets: (up to 100 copies free, quantity prices on request)

- "How (even a little) Drinking Affects Drivers"
- "What Should a Driver Training Instructor Teach about Drinking and Driving?"
- "What Two Drinks Will Do to Your Driving"
- "Liquor Sales and Traffic Deaths" (in Iowa)
- "The Problem of Alcohol and Traffic"
- "Are We Letting the Social Drinker Off the Hook?"

One-page Leaflets:

- "Should You Teach Johnny to Drink?"
- "As Soon As I Get Behind the Wheel I Sober Up"
- "The Unsuspected Traffic Menace — The 'Drinking Driver' "

**SAFETY CITY**
% Mr. V. M. Burkett, Superintendent
Huntsville City Schools
Huntsville, AL 35804
Ask for Curriculum Guide

**SHELL CHEMICAL COMPANY**
320 Interstate North Parkway
Atlanta, GA 30339
Ask for "Shell Chemical Safety Guide"

**SHELL OIL COMPANY**
Shell Answer Books
P. O. Box 61609
Houston, TX 77208

**SHELL OIL COMPANY**
Ms. Kitty Borah, Special Services Representative
P. O. Box 6423
Houston, TX 77001
"Our Energy Problems and Solutions"

**SOAP AND DETERGENT ASSOCIATION**
475 Park Avenue South at 32nd Street
New York, NY 10016
Ask for "Home Safe Home"

**S. C. DEFENSE PLANNING AUTHORITY**
1429 Senate Street
Columbia, SC 29201
Ask for "Natural Disasters In School Settings"

**SOUTH CAROLINA DEPARTMENT OF EDUCATION**
Substance Abuse Unit
1429 Senate Street
Columbia, SC 29201

Books:

- "Decisions, Decisions, Decisions"
- "Prevention — Intervention" — Teacher's Guide; sections dealing with poison prevention and drug use/abuse.

**S. C. FILM LIBRARY**
1500 Senate Street
P. O. Box 11469
Columbia, SC 29201

Films:

- "School Bus Safety"
- "Sniffy Escapes Poisoning"
- "Walk Safe, Ride Safe, Play Safe"
- "Safety on the Playground"
- Bike Wise to be Sure"
- "Mike the Bike"
- "David Won't Be At School Today"

**STATE FARM INSURANCE COMPANY**
Public Relations Dept.
112 E. Washington
Bloomington, IL 61701
Ask for bicycle safety pamphlets.

**SUNBURST COMMUNICATIONS**
Pleasantville, NY 10570
Ask for Teacher's Guide — "First Aid Newest Techniques"

**TEXAS SAFETY ASSOCIATION**
5014 Bull Creek Road
Austin, TX 78731
Ask for guidebook.

**UNDERWRITERS LABORATORIES, INC.**
333 Pfingsten Road
Northbrook, IL 60062

Films:

- "Duel with Fire": Movie shows how a consumer can protect his/her home from fire losses. 26½ minutes, no charge.
- "The Hazard Hunters": Movie shows how the testing laboratory investigates products for hazards. 14 minutes, no charge.
- "The Silent Guardians": Movie shows testing of electrical equipment for the home. 27 minutes, no charge.

Publications:

- "You've Seen It A Million Times"
- "ABCD Spells Fire"
- "Yesterday, Today, and Tomorrow"
- "Lab Data"
- "Mini-Lesson on Home Fire Safety"

**U. S. BUREAU OF PUBLIC ROADS**
Washington, DC 20302
Ask for "Manual on Uniform Traffic Control Devices."

**U. S. CONSUMER PRODUCT SAFETY COMMISSION**
Washington, DC 20207
Ask for publications catalogue.
Ten copies of fact sheets and certain publications can be obtained free from the U. S. Consumer Product Safety Commission, Washington, DC 20207

Brochures:

- "Why Doesn't Somebody Do Something?": describes basic responsibilities of the Commission (GPO #052-003-00034-2; 35¢ for one copy).
- "Your Voice Counts": advises consumers how to participate in commission activities.
- "Take A Close Look: The CPSC Openness Policy": describes how to obtain information about commission proceedings through its open meetings and its freedom of information procedures. (#052-011-00120-1; $4.50 for 25 copies.)

Kits and Books:

- "Poison Prevention Packet": Folder containing informational and educational materials on poison prevention.
- "Poison Awareness": A Resource book for teachers.
- "Who Makes Product Safety Happen? People!": A product safety kit that includes pamphlets and fact sheets on product safety.

**U. S. DEPARTMENT OF DEFENSE**
Office of Civil Defense and
U. S. Department of Health Education
and Welfare
Public Health Service
Family Guide Emergency Health Care
Washington, DC

**U. S. DEPARTMENT OF DEFENSE**
If you area has no local director, address request to:
Emergency Preparedness Division
The Adjutant General's Office
1429 Senate Street
Columbia, SC 29201

Booklet:

- "In Time of Emergency": A citizen's handbook on emergency management.

**U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE**
Public Health Service
Food and Drug Administration
Rockville, MD 20857

Publications:

- "Preventing Childhood Poisonings": Pamphlet describing what example you should set for a child. #75-7001 (FDA) No Charge.
- "Handbook of Common Poisonings in Children": Gives symptoms and treatments for many common kinds of poisonings. #76-7004 (FDA) $1.50 No charge for 1st copy.

- "Typical Poisonous Plants": Pamphlet describes poisonous plants and the antidote. #017-012-00177-7. 75¢, No charge for 1st copy.
- "Dennis the Menace Takes a Poke at Poison": Comic book emphasizing the importance of poison safety. No Charge.
- "National Clearinghouse for Poison Control Centers Bulletin". Monthly bulletin. No charge for single copy.
- "National Clearinghouse for Poison Control Centers Bulletin, October 1979": Listing of manufacturers, telephone numbers and toxic emergencies.
- "National Clearinghouse for Poison Control Centers Bulletin, August, 1979": A directory of Poison Control Centers by state. Will be updated periodically.

**U. S. DEPARTMENT OF TRANSPORTATION**
National Highway Traffic Safety Administration
NASSIF Bldg. 400 7th St., S.W.
Washington, DC 20590
(Order seat belt pamphlets through U. S. Government Printing Office, Public Documents Department, Washington, DC 20402)

Publications:

- "16 Highway Safety Program Standards"
- "The Automotive Safety Belt Fact Book": stock no. 050-003-00250-0; 80¢ each.
- "Teaching the Safety Belt Message': a guide for teachers of driver education instructors; stock no. 050-003-0024808; 35¢ each.
- "Safety Belt Activity Book": stock no. 050-003-00246-1; $1.30 each.
- "The Safety Belt Message": the student's lesson book; stock no. 050-003-00244-5; 45¢ each.
- "Getting the Safety Belt Message Across": guide for driver education instructors; stock no. 050-003-00245-3; 35¢ each.
- "How Many of These Fairy Tales Have You Told?": stock no. 050-003-00251-8; 70¢ each.

Slides:
(Send check or money order made out to National Archives Trust Fund (NAC) to National Audio-Visual Center, General Service Administration, Order Section, Washington, DC 20409)

- "Safety Belts — Fact or Fiction?": fifty 35mm color slides with audiotape cassette and script.

**U. S. ENVIRONMENTAL PROTECTION AGENCY**
Public Information Center (P.M. 215)
Washington, DC 20460

Pamphlet:

- "Pesticides . . . Read the Label First"

**U. S. FOOD AND DRUG ADMINISTRATION**
5401 Westbard Avenue
Bethesda, MD 20207
Attn: NCPCC
Ask for "We Want You to Know About Preventing Childhood Poisonings": A three-fold leaflet, explaining some of the hazards of accidental poisonings and ways to prevent such accidents.

**U. S. GOVERNMENT PRINTING OFFICE**
Superintendent of Document
Washington, DC 20402

Publications:

- "The Skipper's Course"
- "Winter Storms"
- "Take a Tip From Safety Sadie: Poison Proof Your Home"
- "Directory of Poison Control Centers"

**UNITED STATES OF AMERICA STANDARDS INSTITUTE**
10 East 40th Street
New York, NY 10016

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